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VOLUME III—ZOÖLOGY

PART IV. CATALOGUE OF THE FRESH-WATER FISHES OF TROPICAL AND SOUTH TEMPERATE AMERICA

BY

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PART IV.

CATALOGUE OF THE FRESH-WATER FISHES OF TROPICAL AND SOUTH TEMPERATE AMERICA.

BY

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INDIANA UNIVERSITY.

IN the following list are enumerated the orders, families, genera and species of fishes inhabiting the fresh waters of the West Indies, South America, and Middle America south of a line joining the Rio Panuco on the east and the Rio Presidio near Mazatlan on the west. The list attempts to be complete to June, 1909.*

Under each genus will be found the synonyms and the type of the genus, and the total range of its species. The range will be the sum of the distributions of the species enumerated, except in cases of genera having extralimital species.

Under each species are given its synonyms and the geographical distribution.

Opposite each species, except in the case of the Characins and species dealt with in the Patagonian section of this work, will be given a reference which will connect this work with the literature on the species.

A catalogue of the fresh-water fishes of South America was published by Eigenmann and Eigenmann in the Proceedings of the United States National Museum, 1891, and a catalogue of the Middle American species in the same serial for 1892. Free use has been made of these catalogues. The task of bringing the work down to date has been greatly lessened by the following works of recent years:

Jordan & Evermann, Fishes of North and Middle America. Bull. U. S. Nat. Mus., 47, Washington, 1896–1898.

* The entire MS. was completed to 1906. Delay in publication has enabled me to bring the catalogue down to June, 1909. In consequence of bringing the catalogue down to 1909 some discrepancies between the preceding and following lists of species will be found. An especially large number of additions are made to the Characins and the fauna of Guiana.

Pellegrin, Jacques, Contribution a l'Étude anatomique et taxonomique des Poissons de la Famille des Cichlidés. Paris, 1904.

Meek, Seth E., The Fresh-water Fishes of Mexico north of the Isthmus of Tehuantepec. Field Columbian Museum Publications, No. 93, Chicago, 1904.

Regan, C. Tate, A Monograph of the Fishes of the Family Loricariidæ. Trans. Zool. Soc. Lond., XVII, Oct., 1904, various revisions published in 1905, and "Pisces" in the Biologia Centrali Americana, 1906–1908.

Eigenmann, C. H., & Ward, David P., The Gymnotidæ, Wash. Acad. Sci., VII, pp. 159–188, June, 1905.

Eigenmann, C. H., The American Characidæ, *in MS.*

These papers, exclusive of the MS. monograph on the Characidæ, are referred to under the name of the author and the page. Other papers are quoted by the author, year of publication and the page. The full titles may readily be found in the bibliography at the end of the Catalogue.

All fishes recorded from fresh water are enumerated. In tropical America many marine species enter fresh water. Some of these do not go far beyond the mouths of rivers, others ascend streams several thousand miles. Perhaps some of the marine species enumerated should have been excluded, probably others should have been added. The author will be very glad to be informed of any omissions or errors of any sort.

In order to emphasize the Pacific slope fauna the species from this area are in heavy type. To readily distinguish the Amazonian species, these are preceded by an A.

Class I. MARSIPOBRANCHII.

Order HYPEROARTII.

Family PETROMYZONIDÆ.

LAMPETRA Gray.

Type: *Petromyzon fluviatilis* Linnæus.
Range: Brooks of America and Europe.

1. **Lampetra spadicea** Bean, ...Meek, 2.
Habitat: Rio Lerma Basin.

GEOTRIA Gray.

Vèlasia Gray.
Type: *Geotria australis* Gray.
Range: Southern South America and Australia.

1. **Geotria chilensis** (Gray).
Macrophthalmia chilensis Plate.
Habitat: Streams of Chili and Argentina; New Zealand.

EXOMEGAS Gill.

Type: *Petromyzon macrostomus* Burmeister.
Range: From Buenos Aires south.

1. *Exomegas macrostomus* (Burmeister).
Habitat: La Plata River.

2. *Exomegas macrostomus gallegensis* (Smitt).
Habitat: Rio Gallegos.

CARAGOLA Gray.

Mordacia Gray.
Type: *Caragola lapicida* Gray.
Range: Southern South America and Australia.

1. **Caragola mordax** (Richardson).
Caragola lapicida Gray; *Petromyzon anwandteri* Philippi; *Petromyzon acutidens* Philippi.
Habitat: Chili and Tasmania.

Class II. PISCES.

Subclass *SELACHII.*

Order ASTEROSPONDYLI.

Suborder *GALEI.*

Family GALEIDÆ.

CARCHARHINUS Blainville.

Eulamia, Platypodon, Isogomphodon and *Lamiopsis* Gill.
Type: *Carcharhinus commersoni* Blainville=*Carcharias lamia* Rafinesque.
Range: All warm seas.

1. *Carcharhinus nicaraguensis* Gill & Bransford, ...J. & E., 39.
Habitat: Lake Nicaragua and its outlet.

MUSTELUS Cuvier.

Type: *Squalus mustelus* Linnæus.
Range: Warm and temperate seas.

1. *Mustelus canis* (Mitchill), ..J. & E., 29.
Habitat: La Plata.

Order BATOIDEI.

Suborder *SARCURA.*

Family RAJIDÆ.

RAJA Linnæus.

Dipturus and *Platopterus* Rafinesque; *Dasybatus* Blainville; *Propterygia* Otto; *Læviraja* and *Batis* Bonaparte; *Uraptera* Müller & Henle; *Malacorhinus* Garman.
Type: *Raja batis* Linnæus.
Range: Temperate seas, a few of the species entering rivers.

1. *Raja microps* Günther, Shore Fishes, 12.
Habitat: La Plata.
2. *Raja platana* Günther, Shore Fishes, 11.
Habitat: La Plata.

Family NARCOBATIDÆ.

NARCINE Henle.

Cyclonarce and *Gionionarce* Gill.
Type: *Torpedo brasiliensis* Ölfers.
Range: Warm seas; a single American species; enters rivers.

1. *Narcine brasiliensis* (Ölfers), J. & E., 78.

Narcine corallina Garman; *Narcine umbrosa* Jordan; *Torpedo bancrofti* Griffith; *Narcine nigra* Duméril; *Torpedo pictus* Gronow.

Habitat: Pensacola and Key West to Brazil, entering rivers.

Suborder *MASTICURA.*

Family MYLIOBATIDÆ.

MYLIOBATIS Duméril.

Holorhinus Gill.

Type: *Raja aquila* Linnæus.

Range: Warm seas.

1. *Myliobatis aquila* (Linnæus), Günther, VIII, 489

Habitat: All warm seas; La Plata.

Family DASYATIDÆ.

PARATRYGON Duméril.

Disceus Garman.

Type: *Trygon aicreba* Cuvier.

Range that of the single species,

A1. *Paratrygon strongylopterus* (Schomburgk), ...Günther, VIII, 476.

Trygon aiereba Duméril; *Trygon orbicularis* Günther.

Habitat: British Guiana; Amazons.

POTAMOTRYGON Garman.

Type: *Pastinaca humboldtii* Roulin.

Range: Fresh waters of South America.

1. *Potamotrygon brachyurus* (Günther), Günther 1880, 8.

Habitat: La Plata.

A2. *Potamotrygon humboldtii* (Roulin).

Trygon hystrix Müller & Henle.

? Trygon garrapa Schomburgk.

Habitat: Rivers from the La Plata to the Orinoco; Paraguay, Rio Branco; Orinoco at Apuré.

3. *Potamotrygon d'orbignyi* (Castelnau), Günther, VIII, 484.

Habitat: Orinoco.

A4. *Potamotrygon reticulatus* Günther, as *hystrix* Günther, VIII, 482.

Habitat: Surinam; Santarem.

5. *Potamotrygon magdalenæ*[1] (Steindachner), ...Steindachner, 1878, 56.

Habitat: Rio Magdalena.

A6. *Potamotrygon motoro* (Müller & Henle), ...Günther, VIII, 484.

Trygon henlei Castelnau; *Trygon garrapa* Schomburgk; *Tœniura mülleri* and *henlei* Castelnau.

Habitat: Rio Cuyaba; Rio Branco.

A7. *Potamotrygon dumerilii* (Castelnau), Günther, VIII, 484.

Habitat: Araguay; Tocantins; Rio Crixas; Paraguay.

ELLIPESURUS Schomburgk.

Type: *Ellipesurus spinicauda* Schomburgk.

Range that of the single species.

A1. *Ellipesurus spinicauda* Schomburgk, Günther, VIII, 472.

Habitat: Rio Jurua; Rio Branco.

[1] Garman considers *d'orbignyi* and *magdalenæ* synonymous with *humboldtii.*

Subclass *DIPNOI.*

Order DIPNEUMONA.

Family LEPIDOSIRENIDÆ.

LEPIDOSIREN Fitzinger.

Amphibichthys Hogg.
Type: *Lepidosiren paradoxa* Fitzinger.
Range that of the single species.

A1. *Lepidosiren paradoxa* Fitzinger, Günther, III, 322.
Lepidosiren assimilis Castelnau; *Lepidosiren articulata* Ehlers.
Habitat: Amazons to Paraguay.

Subclass *TELEOSTOMI.*

Order RHOMBOGANOIDEA.

Family LEPISOSTEIDÆ.

LEPISOSTEUS Lacépède.[1]

Cylindrosteus, Atractosteus, Sarchirus Rafinesque; *Lepidosteus* Agassiz.
Type: *Lepisosteus gavialis* Lacépède.
Range: Panama and northward to Cuba and the Atlantic slope of North America.

1. *Lepisosteus tristœchus* (Bloch & Schneider), ...Meek, 6.
Lepidosteus berlandi Girard; *Atractosteus lucius* Duméril; *Lepidosteus viridis* Günther.
Habitat: Cuba and Mexico from Tampico north.
2. *Lepisosteus tropicus* (Gill), ...Meek, 7.
Habitat: Isthmus of Tehuantepec, Rio Usumacinta to Panama; Huamuchal.

Superorder *OSTARIOPHYSI.*

Order NEMATOGNATHI.

Family ASPREDINIDÆ.

Subfamily BUNOCEPHALINÆ.

BUNOCEPHALICHTHYS Bleeker.

Type: *Bunocephalus hypsiurus* Kner.
Range that of the single species.

A1. *Bunocephalichthys hypsiurus* (Kner), E. & E., 14.
Habitat: Rio Branco.

AGMUS Eigenmann MS.

Type: *Bunocephalus scabriceps* E. & E.
Range: Amazons to Guiana.

A1. *Agmus scabriceps* (Eigenmann & Eigenmann).
Habitat: Jutahy.
2. *Agmus lyriformis* Eigenmann MS.
Habitat: British Guiana.

BUNOCEPHALUS Kner.

Type: *Platystacus verrucosus* Bloch.
Range: Amazons; Paraguay; Rio Grande do Sul.

[1] *Lepisosteus osseus*, a north temperate species, reaches Tampico just within the tropics.

1. *Bunocephalus amaurus* Eigenmann MS.
Habitat: British Guiana.

A2. *Bunocephalus verrucosus* (Bloch), E. & E., 16.
Habitat: Amazon, below the Madeira.

3. *Bunocephalus doriæ* Boulenger, Boulenger, 1902.
Habitat: Paraguay.

4. *Bunocephalus iheringii* Boulenger, Boulenger, 1891, 235.
Habitat: Rio Grande do Sul and Paraguay.

5. *Bunocephalus rugosus* Eigenmann & Kennedy, ...1903, 498.
Habitat: Paraguay.

A6. *Bunocephalus gronovii* Bleeker, E. & E., 17.
Habitat: Mouth of Rio Negro and Demarara.

A7. *Bunocephalus bicolor* Steindachner, E. & E., 17.
Habitat: Amazon and its tributaries from Cudajas to Huallaga.

A8. *Bunocephalus melas* Cope, E. & E., 18.
Habitat: Peruvian Amazon.

A9. *Bunocephalus knerii* Steindachner, E. & E., 19.
Habitat: Amazons and tributaries from Cudajas to the Andes of Peru and Ecuador.

A10. *Bunocephalus aleuropsis* Cope, E. & E., 19.
Habitat: Pebas, Ecuador.

11. *Bunocephalus chamaizelus* Eigenmann MS.
Habitat: British Guiana.

DYSICHTHYS Cope.

Type: *Dysichthys coracoideus* Cope.
Range: Nauta; Paraguay.

A1. *Dysichthys coracoideus* Cope, E. & E., 20.
Habitat: Nauta.

2. *Dysichthys australis* Eigenmann & Ward, E. & W., 1907, 113.
Habitat: Paraguay.

Subfamily ASPREDININÆ.

PLATYSTACUS Bloch.

Type: *Platystacus cotylephorus* Bloch; *Cotylephorus* Swainson.
Range: Surinam.

A1. *Platystacus cotylephorus* Bloch, E. & E., 21.
Silurus hexadactylus Lacépède; *Aspredo sexcirrhis* Cuvier & Valenciennes; *Aspredo spectrum* Gronow.
Habitat: Surinam and Rio Para.

2. *Platystacus nematophorus* Bleeker, E. & E., 23.
Habitat: Surinam.

ASPREDO Bleeker.

Type: *Aspredo batrachus* (Linnæus).
Range: Guiana to the Araguay.

A1. *Aspredo aspredo* (Linnæus), E. & E., 23.
Platystacus lævis Bloch; *Aspredo batrachus* (Linnæus).[1]
Habitat: Guiana; Rio Para and Arary.

2. *Asprcdo sicuephorus* Cuvier & Valenciennes, ...E. & E., 24.
Habitat: French and British Guiana.

CHAMAIGENES Eigenmann.

Type: *Aspredo filamentosus* C. & V.
Range that of the single species.

1. *Chamaigenes filamentosus* (Cuvier & Valenciennes), ...E. & E., 24.
Habitat: Guianas.

ASPREDINICHTHYS Bleeker.

Type: *Aspredo tibicen* Temmink.
Range that of the single species

[1] Vaillant has suggested that *batrachus* may be identical with *sicuephorus*, in which case the next species should go by the name of *batrachus*.

A1. *Aspredinichthys tibicen* (Temmink), E. & E., 24.
Habitat: Guiana; Curuca, Rio Muria.

Family DIPLOMYSTIDÆ.

DIPLOMYSTE Duméril.

Type: *Arius pappilosus* Cuvier & Valenciennes.
Range that of the single species.

1. **Diplomyste pappilosus** (Cuvier & Valenciennes), ...E. & E., 26.
Arius carcharias, villosus, squalus, micropterus and *synodon* Philippi.
Habitat: Chili and Rio Negro of Patagonia.

Family SILURIDÆ.

Subfamily ARIINÆ.[1]

PARADIPLOMYSTES Bleeker.

Type: *Pimelodus coruscans* Lichtenstein.
Range that of the single species.

1. *Paradiplomystes coruscans* (Lichtenstein), ...E. & E., 30.
Habitat: Brazil.

GENIDENS Castelnau.

Type: *Genidens cuvieri* Castelnau.
Range that of the single species.

A1. *Genidens genidens* (Cuvier & Valenciennes), ...E. & E., 38.
Genidens cuvieri and *granulosus* Castelnau. *? Rhamdia laukidi* Bleeker.
Habitat: Rio de La Plata; Araguay.

FELICHTHYS Swainson.

Breviceps Swainson; *Ailurichthys* Baird & Girard; *Mystus* Gronow.
Type: *Silurus bagre* Linnæus.
Range: Tropical seas of America. Probably several species will be found entering streams. *F. bagre* and *marinus* are found in the market at Georgetown.

1. *Felichthys filamentosus* Swainson, J. & E., 118.
Galeichthys blochii Cuvier & Valenciennes; *Silurus bagre* Bloch *non* Linnæus.
Habitat: Atlantic side of tropical American seas; Lake Nicaragua.

GALEICHTHYS Cuvier & Valenciennes.[1]

Type: *Galeichthys feliceps* Cuvier & Valenciennes.
Range: Pacific and temperate seas.

1. **Galeichthys aguadulce** Meek, .Meek, 9.
Habitat: Rio Papaloapam Basin.

NETUMA Bleeker.

Type: *Arius nasutus* Cuvier & Valenciennes.
Range: Tropical seas, entering rivers.

1. *Netuma upsulonophorus* (Eigenmann & Eigenmann), ...E. & E., 73.
Habitat: Rio Grande do Sul.
2. *Netuma barbus* (Lacépède), E. & E., 76.
Pimelodus commersoni Lacépède; *Bagrus barbatus* Quoy & Gaimard; *Pimelodus versicola* Castelnau.

[1] Many species of the Ariinæ in addition to those enumerated are found at the mouths of rivers and undoubtedly enter fresh water at times.

[1] *Galeichthys guatemalensis* Günther has been reported from Rio Lara, Darien.

Habitat: La Plata and northward, entering rivers.

ARIUS Cuvier & Valenciennes.

Type: *Pimelodus arius* Buchanan.

Range: Tropical seas, entering rivers.

1. *Arius agassizi* (Eigenmann & Eigenmann), ...E. & E., 86.
   Habitat: Rio Grande do Sul.
2. *Arius multiradiatus* Günther, E. & E., 92.
   Habitat: Rios Bayano and Cianati, Panama.

HEXANEMATICHTHYS Bleeker.

Type: *Bagrus sundaicus* Cuvier & Valenciennes.

Range: Tropical seas, a few of the species entering rivers.

1. *Hexanematichthys assimilis* (Günther), E. &. E., 81.
   Habitat: Atlantic coast of Central America; Lake Yzabel, Guatemala; Rio Magdalena.
2. *Hexanematichthys grandoculis* (Steindachner), ...E. & E., 85.
   Habitat: Rio Doce.

SCIADEICHTHYS Bleeker.

Type: *Bagrus emphysetus* Müller & Troschel.

Range: Tropical seas, a few of the species entering rivers.

A1. *Sciadeichthys albicans* (Cuvier & Valenciennes), ...E. & E., 59.
   Habitat: Amazon and northward.

Subfamily ICTALURINÆ.

ICTALURUS Rafinesque.[1]

Range: Isthmus of Tehuantepec northeast throughout the Atlantic slope.

1. *Ictalurus meridionalis* (Günther), Meek, 11.
   Habitat: Atlantic slope of the Isthmus of Tehuantepec.

AMEIURUS Rafinesque.

Type: *Pimelodus cupreus* Rafinesque.

Range: Lerma Basin and valley of Mexico northeast throughout the Atlantic slope of America.

(HAUSTOR Jordan & Evermann.)

(Type: *Gadus lacustris* Walbaum.)

1. *Ameiurus australis* Meek, ...Meek, 13.
   Habitat: Rio Panuco to Rio Blanco.
2. **Ameiurus dugesi** Bean, ...Meek, 15.
   Amiurus catus Pellegrin.
   Habitat: Lerma Basin.
3. **Ameiurus mexicanus** Meek, .Meek, 15.
   Habitat: Rio Panuco Basin.
4. *Ameiurus pricei* (Rutter), ...Meek, 16.
   Habitat: Mesquital Basin north in streams of the Sierra Madre.

ISTLARIUS Jordan & Snyder.

Type: *Istlarius balsanus* Jordan & Snyder.

Range that of its single species.

1. **Istlarius balsanus** Jordan & Snyder, Meek, 17.
   Habitat: Balsas Basin, Mexico.

Subfamily CALLOPHYSINÆ.

CALLOPHYSUS Müller & Troschel.

Type: *Callophysus macropterus* Müller & Troschel; *Pimelotropis* Gill; *Pseudocallophysus* Bleeker.

Range that of the single species.

A1. *Callophysus macropterus* (Lichten-

[1] *Ictalurus furcatus* and *punctatus* of the Mississippi valley reach the Rio Panuco.

stein), ...E. & E., 95.
Pimelodus ctenodus Agassiz; *Pimelodus insignis* Schomburgk; *Pimelodus lateralis* Gill.
Habitat: Amazons and northward.

Subfamily PIMELODINÆ.

PIMELODINA Steindachner.

Type: *Pimelodina flavipinnis* Steindachner.
Range: Lower Amazon.

A1. *Pimelodina flavipinnis* Steindachner, E. & E., 101.
Habitat: Para.

A2. *Pimelodina nasus* Eigenmann & Eigenmann, ...E. & E., 101.
Habitat: Para.

A3. *Pimelodina gœldii* Steindachner, St. 1908b.
Habitat: Rio Purus.

PINIRAMPUS Bleeker.

Type: *Pimelodus pirinampu* Spix.

A1. *Pinirampus pirinampu* (Spix), E. & E., 104.
? Pimelodus barbancho Humboldt; *Pinirampus typus* Bleeker.
Habitat: Paraguay; Rio Tocantins to Venezuela.

MEGALONEMA Eigenmann MS.

Type: *Megalonema platycephalum* Eigenmann.
Range that of the single species.

1. *Megalonema platycephalum* Eigenmann.
Habitat: Essequibo Basin.

LUCIOPIMELODUS Eigenmann & Eigenmann.

Perugia Eigenmann & Norris.
Type: *Pimelodus pati* Valenciennes.
Range: Rio de La Plata to Rio Branco.

A1. *Luciopimelodus pati* (Valenciennes), E. & E., 106
Habitat: La Plata and Rio Branco.

2. *Luciopimelodus platanus* (Günther), E. & E., 108.
Habitat: La Plata; Paraguay.

3. *Luciopimelodus agassizii* Steindachner, E. & E., 183.
Habitat: Amazons.

ZUNGAROPSIS Steindachner.

Type: *Zungaropsis multimaculatus* St.
Range that of the single species.

A1. *Zungaropsis multimaculatus* Steindachner, ...St. 1908a.
Habitat: Xingu.

LOPHIOSILURUS Steindachner.

Type: *Lophiosilurus alexandri* Steindachner.
Range that of the single species.

1. *Lophiosilurus alexandri* Steindachner, E. & E., 110.
Pseudopimelodus agassizii Steindachner.
Habitat: Rio San Francisco.

BATRACHOGLANIS Gill.

Type: *Pimelodus raninus* Cuvier & Valenciennes.
Range: Rio de Janeiro to the Essequibo.

1. *Batrachoglanis parahybæ* Steindachner, E. & E., 110.
Pseudopimelodus charus Steindachner, *non* Cuvier & Valenciennes.
Habitat: Rio Parahyba to Rio Doce.

A2. *Batrachoglanis raninus* (Cuvier & Valenciennes), ...E. & E., 111.
Habitat: Rio Janeiro to Essequibo and Peru.

3. *Batrachoglanis pulcher* (Boulenger), E. & E., 111.
Habitat: Eastern Ecuador.

PSEUDOPIMELODUS Bleeker.

Type: *Pimelodus bufonius* Cuvier & Valenciennes.

Range: Rio de La Plata to Rio Magdalena.

A1. *Pseudopimelodus bufonius* (Cuvier & Valenciennes), ...E. & E., 112.
Pimelodus charus Cuvier and Valenciennes.
Habitat: Rio San Francisco to Magdalena.

2. *Pseudopimelodus cottoides* Boulenger, Boulenger, 1891, 233.
Habitat: Camaquam River; Paraguay River.

A3. *Pseudopimelodus acanthochira* Eigenmann & Eigenmann, ..E. & E., 114.
Habitat: Amazons from Para to Tabatinga.

4. *Pseudopimelodus villosus* Eigenmann MS.
Habitat: British Guiana.

5. *Pseudopimelodus albomarginatus* Eigenmann MS.
Habitat: Potaro River, British Guiana.

ZUNGARO Bleeker.

Type: *Pimelodus zungaro* Humboldt.

Range: La Plata and Upper Amazon.

A1. *Zungaro zungaro* (Humboldt).
Zungaro humboldtii Bleeker.
Habitat: Marañon.

2. *Zungaro mangurus* (Valenciennes).
Habitat: La Plata.

BREVIGLANIS Eigenmann MS.

Type: *Breviglanis frenata* Eigenmann.

Range: British Guiana.

1. *Breviglanis frenata* Eigenmann MS.
Habitat: Amatuk Cataract.

2. *Breviglanis melas* Eigenmann MS.
Habitat: British Guiana.

3. *Breviglanis phalacra* Eigenmann MS.
Habitat: Amatuk Cataract.

LEPTOGLANIS Eigenmann MS.

Type: *Leptoglanis essequibensis* Eigenmann.

Range that of the single species.

1. *Leptoglanis essequibensis* Eigenmann MS.
Habitat: Middle Essequibo River.

MYOGLANIS Eigenmann MS.

Type: *Myoglanis potaroensis* Eigenmann.

Range: Guiana and ? Uruguay.

1. *Myoglanis potaroensis* Eigenmann MS.
Habitat: Potaro River, British Guiana.

A2. *Myoglanis collettii* (Steindachner),[1] E. & E., 146.
Habitat: Maldonado.

CHASMOCEPHALUS Eigenmann MS.

Type: *Chasmocephalus longior* Eigenmann.

Range: British Guiana.

1. *Chasmocephalus longior* Eigenmann MS.
Habitat: Central British Guiana.

2. *Chasmocephalus brevior* Eigenmann MS.
Habitat: Potaro River.

HEPTAPTERUS Bleeker.

Type: *Pimelodus mustelinus* Valenciennes.

Range: La Plata to Rio Grande do Sul.

1. *Heptapterus mustelinus* (Valenciennes), St., 1907, 486.
Habitat: Santa Catharina and Rio Grande do Sul; Rio de La Plata.

2. *Heptapterus eigenmanni* Steindachner, E. & E., 144.
H. mustelinus Eigenmann, *non* Valenciennes.
Habitat: Maldonado.

3. *Heptapterus multiradiatus* von Ihering, v. I., 1907, 20.
Habitat: Alto da Serra, São Paulo.

[1] I am not sure of the generic position of this species.

ACENTRONICHTHYS Eigenmann & Eigenmann.

Type: *Acentronichthys leptos* Eigenmann & Eigenmann.

Range: Maldonado to Surinam.

1. *Acentronichthys leptos* Eigenmann & Eigenmann, ...E. & E., 145.
Habitat: São Matheos.
2. *Acentronichthys surinamensis* (Bleeker), E. & E., 146.
Habitat: Surinam.

IMPARFINIS Eigenmann & Norris.

Type: *Imparfinis piperatus* Eigenmann & Norris.

Rhamdioglanis v. Ihering.

Range: South Eastern Brazil.

1. *Imparfinis piperatus* Eigenmann & Norris, ...E. & N., 1900, 352.
Habitat: São Paulo, Brazil.
2. *Imparfinis frenatus* (von Ihering), v. I., 1907, 16.
Habitat: San Sebastiao.
3. *Imparfinis transfasciatus* (Ribeiro), R., 1908.
Habitat: Rio Ribeira.

NANNOGLANIS Boulenger.

Type: *Nannoglanis fasciatus* Boulenger.

Range: Alto do Serra; Ecuador.

A1. *Nannoglanis fasciatus* Boulenger, E. & E., 147.
Habitat: Ecuador.
2. *Nannoglanis bifasciatus* Eigenmann & Norris, ...E. & N., 1900, 351.
Habitat: Alto do Serra, southeastern Brazil.

RHAMDIA Bleeker and RHAMDELLA Eigenmann & Eigenmann.[1]

Pteronotus Swainson; *Pimelonotus* Gill; *Notoglanis* Günther.

Type: *Pimelodus quelen* Quoy & Gaimard.

Range: La Plata to Mexico and western Peru; Para to Lake Titicaca.

1. *Rhamdia velifer* (Humboldt), E. & E., 117.
Habitat: Magdalena river.
2. *Rhamdia argentina* (Humboldt), E. & E., 117.
Habitat: Magdalena river, near Chilloa.
3. *? Rhamdia laukidi* Bleeker.
Habitat: Guiana.
4. *Rhamdia grunniens* (Humboldt), E. & E., 118.
Habitat: Orinoco.
5. *Rhamdia breviceps* (Kner), E. & E., 121.
Habitat: Marabitanos.
6. *Rhamdia schomburgkii* Bleeker, E. & E., 122.
Habitat: Guiana; Brazil.

A7. *Rhamdia bathyurus* Cope, E. & E., 122.
Habitat: Marañon.

A8. *Rhamdia obesa* Eigenmann & Eigenmann, ...E. & E., 122.
Habitat: Teffé.

A9. *Rhamdia sebæ* (Cuvier & Valenciennes), ...E. & E., 123.
Pimelodus stegelichii and *museulus* Müller & Troschel; *Pimelodus holomelas* and *mülleri* Günther.
Habitat: Rio de Janeiro and Paraguay to Rio Magdalena and Tabatinga.

A10. *Rhamdia sebæ kneri* (Steindachner), E. & E., 126.
Habitat: Upper Paraguay and northward.

11. *Rhamdia vilsoni* Gill.
Habitat: Trinidad.

A12. *Rhamdia humilis* (Günther), E. & E., 126.
Habitat: Marañon to Venezuela.

[1] The genera *Rhamdia* and *Rhamdella* (type *eriarcha*) are both valid, but since not all species have been examined in regard to their generic characters, they are here temporarily combined.

13. **Rhamdia cinerascens** (Günther), E. & E., 127.

Habitat: Guayaquil; Esmeraldas; Rio Saule; Rio Peripa.

A14. *Rhamdia pentlandi* (Cuvier & Valenciennes), ...E. & E., 127.

Habitat: Peruvian Andes.

A15. *Rhamdia quelen* (Quoy & Gaimard), E. & E., 127.

Heterobranchus sexteutaculatus Agassiz; *Pimelodus sellonis* Müller & Troschel; *? Pimelodus bahianus* Castelnau; *Silurus sapipoca* Natterer; *Pimelodus wuchereri* Günther; *Pimelodus quelen cuprea* Steindachner; *Pimelodus cuyabæ* Steindachner.

Habitat: Rio de La Plata to the Amazon and Guiana.

A16. *Rhamdia parvani* Boulenger, Boulenger, 1898, 7.

Habitat: Rio Santiago; Rio Zamora and Rio Bamboiza.

A17. *Rhamdia multiradiata* (Kner), E. & E., 130.

Pimelodus arekaima Schomburgk (part).

Habitat: Amazons and tributaries and northward.

18. *Rhamdia sapo* (Valenciennes), E. & E., 130.

Habitat: La Plata to Rio Grande do Sul.

19. *Rhamdia hilarii* (Cuvier and Valenciennes), ...E. & E., 131.

Habitat: Rio San Francisco and its tributaries; Porto Alegre south to Rio de La Plata.

20. *Rhamdia depressa* Barbour & Cole, Regan, 1907–8, 131.

Rhamdia boucardi Regan.

Habitat: Yucatan.

21. **Rhamdia wagneri** (Günther), Regan, 1907–8, 13.

Pimelodus cinerascens Kner & Steindachner, *non* Günther; *Rhamdia bransfordi* Gill.

Habitat: Eastern and western slopes of Central America; Tabasco, Mexico.

A22. *Rhamdia longicauda* (Boulenger), E. & E., 135.

Habitat: Eastern Ecuador.

A23. *Rhamdia dorsalis* (Gill), E. & E., 135.

Habitat: Marañon.

A24. *Rhamdia poeyi* Eigenmann & Eigenmann, ...E. & E., 135.

Habitat: Goyaz.

A25. *Rhamdia tenella* Eigenmann & Eigenmann, ...E. & E., 136.

Habitat: Cudajas.

26. *Rhamdia brachypterus* (Cope), Meek, 21.

Habitat: Mountain streams of south-central Vera Cruz.

27. *Rhamdia heteracanthus* Regan, Regan, 1907–8, 134.

Habitat: Costa Rica.

28. *Rhamdia rogersi* Regan, Regan, 1907–8, 136.

Habitat: Costa Rica.

29. *Rhamdia regani* Meek, Meek, 1907a, 144.

Habitat: Costa Rica.

(RHAMDELLA Eigenmann & Eigenmann.[1])

(Type: *Rhamdella eriarcha* Eigenmann & Eigenmann.)

(Range: Rio Janeiro to Mexico; on both slopes of Central America and Mexico.)

30. *Rhamdia foina* (Müller & Troschel), E. & E., 126.

Habitat: Guiana.

31. *Rhamdia microcephalus* (Rheinhardt), E. & E., 138.

Habitat: Rio das Velhas.

A32. *Rhamdia notata* (Schomburgk), E. & E., 139.

Habitat: Rio Branco.

[1] I am not sure of the genus of numbers 38–52. Some of these are probably *Rhamdia*.

33. *Rhamdia eriarcha* Eigenmann & Eigenmann, ...E. & E., 139.
Habitat: Rio Grande do Sul.
34. *Rhamdia exudans* (Jenyns), E. & E., 140.
Habitat: ? Rio de Janeiro.
35. *Rhamdia ignobilis* Steindachner, St. 1907a, 484.
Habitat: Rio Cubatao.
36. *Rhamdia jenynsii* (Günther), E. & E., 140.
Habitat: Rio de Janeiro to the Rio de La Plata.
37. **Rhamdia gilli** Starks, Starks, 1906, 767.
Habitat: Rio Eten, Peru.
38. *Rhamdia minuta* (Lütken), E. & E., 142.
Habitat: Rio de Janeiro; Macacos.
39. *Rhamdia straminea* Cope, ... 1893.
Habitat: Rio Grande do Sul.
40. **Rhamdia parryi** Eigenmann & Eigenmann, ...Regan, 1907–8, 130.
Habitat: Rio Zaneleneo near Tonala, Mexico.
41. *Rhamdia petenensis* (Günther), Regan, 1907–8, 132.
Habitat: Lake Peten and Chiapas, Mexico.
42. **Rhamdia baronis mülleri** (Troschel),
Habitat: Pacific slope of Mexico.
43. **Rhamdia guatemalensis** (Günther), Regan, 1907–8, 132.
R. oaxacæ Meek.
Habitat: Huamuchal, Guatemala and Nicaragua.
44. *Rhamdia salvini* (Günther), Regan, 1907–8, 135.
Habitat: Rio San Geronimo, Guatemala.
45. *Rhamdia policaulus* (Günther), Regan, 1907–8, 136.
Habitat: Rio San Geronimo, Guatemala.
46. *Rhamdia managuensis* (Günther), Regan, 1907–8, 133.
Habitat: Lake Managua.
47. *Rhamdia hypselurus* (Günther), Regan, 1907–8, 134.
Habitat: Mexico.
48. *Rhamdia motaguensis* (Günther), Regan, 1907–8, 130.
Habitat: Rio Motagua.
49. *Rhamdia laticauda* (Heckel), Regan, 1907–8, 136.
Habitat: Mexico.
50. *Rhamdia nicaraguensis* (Günther), Regan, 1907–8, 130.
Habitat: Lake Nicaragua.
51. *Rhamdia micropterus* (Günther), Regan, 1907–8, 133.
Habitat: Rio San Geronimo.
52. *Rhamdia godmani* (Günther), Günther, V, 124.
? R. sacrificii Barbour & Cole.
Habitat: Lower Vera Paz; Mexico; Rio Motagua.
53. *Rhamdia sacrificii* Barbour & Cole, B. & C., 1906, 156.
Habitat: Yucatan.
54. *Rhamdia barbata* Meek, M., 1907, 106.
Habitat: Managua and Rio San Francisco, Nicaragua.
55. *Rhamdia brachycephalus* Regan, R., 1907–8, 135
Habitat: Guatemala.
56. *Rhamdia underwoodi* Regan, R., 1907–8, 135.
Habitat: Costa Rica.

Typhlobagrus Ribeiro.

Type: *Typhlobagrus kronei* Ribeiro.
Range that of the single species.
1. *Typhlobagrus kronei* Ribeiro.
Habitat: Caves of Santa Catharina.

Phreatobius Gœldi.[1]

Type: *Phreatobius cisternarum* Gœldi.
Range that of the single species.
A1. *Phreatobius cisternarum* Gœldi.

[1] I am not sure of the zoölogical position of this subterranean fish.

Habitat: Subterranean waters of Marajo.

PIMELODUS Lacépède.

Pseudariodes Bleeker; *Pseudorhamdia* Bleeker.

Type: *Silurus clarias* Bloch.

Range: Rio de La Plata to Panama.

A1. *Pimelodus cyanostigma* (Cope), E. & E., 164.

Habitat: Pebas, Ecuador.

2. *Pimelodus quadrimaculatus* (Bloch), E. & E., 164.

Habitat: America.

A3. *Pimelodus ornatus* Kner, E. & E., 168.

Habitat: Paraguay; Brazilian Amazons and northward.

4. *Pimelodus albicans* (Valenciennes), E. & E., 169.

Habitat: Rio de La Plata to Matto Grosso.

A5. *Pimelodus pictus* Steindachner, E. & E., 170.

Habitat: Marañon to Hyaray.

A6. **Pimelodus clarias** (Bloch), E. & E., 171.

Pimelodus maculatus Lacépède; *Pimelodus rigidus* Spix; *Pimelodus blochii* Cuvier & Valenciennes; *Pimelodus arekaima* Schomburgk; *Mystus ascita* Gronow; *Pimelodus macronema* Bleeker; *Pseudariodes pantherinus* Lütken; *Pseudorhamdia piscatrix* Cope; *Piramutana macrospila* Günther.

Habitat: Rio de La Plata to Panama.

7. *Pimelodus valenciennis* Kröyer, E. & E., 180.

Pimelodus nigribarbis Boulenger.

Habitat: Rio de La Plata to Paraguay and San Francisco.

8. *Pimelodus grosskopfii* Steindachner, E. & E., 180.

Habitat: Magdalena Basin.

A9. *Pimelodus altipinnis* Steindachner, E. & E., 180.

Habitat: Amazon and northward.

A10. *Pimelodus fur* (Reinhardt), E. & E., 182.

Pimelodus maculatus Kner, *non* Valenciennes; *Pimelodus microstoma* Steindachner.

Habitat: Rio Paraguay; Rio San Francisco and Amazon.

11. *Pimelodus spegazzinii* Perugia, Perugia, 1891, 32.

Habitat: Rio Durango.

12. *Pimelodus argenteus* Perugia, Perugia, 1891, 31.

Habitat: Rio de La Plata; Rio Parana.

GŒLDIELLA Eigenmann & Norris.

Type: *Pimelodus eques* Müller & Troschel.

Range that of the single species.

A1. *Gœldiella eques* (Müller & Troschel), E. & E., 166.

Habitat: Brazilian Amazons and northward.

IHERINGICHTHYS Eigenmann & Norris.

Type: *Pimelodus labrosus* Kröyer.

Range: Rio de La Plata Basin.

1. *Iheringichthys labrosus* (Kröyer), E. & E., 180.

Habitat: Rio de La Plata Basin.

2. *Iheringichthys megalops* Eigenmann & Ward, ...E. & W., 1907, 115.

Habitat: Bahia Negra on the Paraguay.

PIMELODELLA Eigenmann & Eigenmann.

Type: *Pimelodus cristatus* Müller & Troschel.

Range: La Plata to Panama and western Ecuador.

A1. *Pimelodella cristata* (Müller & Troschel), ... E. & E., 150.

Pimelodus agassizii Steindachner; *Pimelodus ophthalmicus* Cope.

Habitat: North of the Mucuri to Peru and Ecuador.

A2. *Pimelodella wesselii* (Steindachner), E. & E., 152.
Habitat: Rio Puty to Cudajas and Essequibo.

A3. *Pimelodella gracilis* (Valenciennes), E. & E., 153.
Habitat: Rio de La Plata to the Orinoco.

4. *Pimelodella pectinifer* Eigenmann & Eigenmann, ...E. & E., 154.
Habitat: Rio Parahyba.

5. **Pimelodella modesta** (Günther), E. & E., 155.
Habitat: Western Ecuador and eastern Panama.

6. **Pimelodella elongata** (Günther), E. & E., 155.
Habitat: Pacific slope of Ecuador.

7. **Pimelodella grisea** Regan, Regan, 1903.
Habitat: Durango; Sapayo and Vaqueria rivers, northwest Ecuador.

A8. *Pimelodella lateristriga* (Müller & Troschel), ...E. & E., 156.
Habitat: Atlantic slope, north of Rio Grande do Sul; Paraguay.

9. *Pimelodella hartii* (Steindachner), E. & E., 158.
Habitat: Rio Parahyba.

A10. *Pimelodella buckleyi* (Boulenger), Boul., 1887, 275.
Habitat: Canelos.

11. *Pimelodella eigenmanni* Boulenger, E. & E., 158.
Pimelodella buckleyi Eigenmann & Eigenmann, *non* Boulenger.
Habitat: Rio Parahyba and Macacos.

12. *Pimelodella vittata* (Kröyer), E. & E., 159.
Habitat: Atlantic slope streams of Minas Geraes and Bahia.

13. *Pimelodella tæniophora* Regan, Regan, 1903, 625.
Pimelodella lateristriga Boulenger, *non* Müller & Troschel.
Habitat: Paraguay River.

14. *Pimelodella chagresi* (Steindachner), E. & E., 160.
Habitat: Rio Chagres and its tributaries.

15. *Pimelodella brasiliensis* (Steindachner), E. & E., 162.
Habitat: Rio Parahyba.

16. *Pimelodella mucosa* Eigenmann & Ward, ...1907, 114.
Habitat: Paraguay.

17. **Pimelodella yucensis** Steindachner, Steind., 1902, 47.
Habitat: Pacasmaya, north Peru.

18. *Pimelodella meeki* Eigenmann, Meek, 1905, 24.
P. eigenmanni Meek, *non* Boulenger.
Habitat: São Paulo.

19. *Pimelodella megalops* Eigenmann MS.
Habitat: Central British Guiana.

20. *Pimelodella macturkii* Eigenmann MS.
Habitat: Coastwise streams of British Guiana.

BERGIARIA Eigenmann & Norris.

Type: *Pimelodus westermanni* Reinhardt.

Bergiella Eigenmann & Norris. (Preoc.)
Range: Rio San Francisco to La Plata.

1. *Bergiaria westermanni* (Reinhardt), E. & E., 180.
Habitat: Rio das Velhas.

2. *Bergiaria platana* (Steindachner).
Habitat: La Plata.

CONORHYNCHOS Bleeker.

Type: *Pimelodus conirostris* Cuvier & Valenciennes.

Range: Porto Seguro and Rio San Francisco to Yucatan.

1. *Conorhynchos conirostris* (Cuvier & Valenciennes), ...E. & E., 185.
Habitat: Rio San Francisco Basin.

A2. *Conorhynchos glaber* Steindachner, E. & E., 185.
Habitat: Porto Seguro.

3. *Conorhynchos nelsoni* Evermann & Goldsborough, ...Meek, 19.
Habitat: Rio Usumacinta, Montecristo, Chiapas.

BAGROPSIS Lütken.

Type: *Bagropsis reinhardti* Lütken.
Range that of the single species.

1. *Bagropsis reinhardti* Lütken, E. & E., 186.
Habitat: Rio das Velhas.

PLATYNEMATICHTHYS Bleeker.

Type: *Bagrus punctulatus* Kner.
Range: Amazons and tributaries.

A1. *Platynematichthys punctulatus* (Kner), E. & E., 187.
Bagrus nigripunctatus Kner.
Habitat: Rio Guaporé to Rio Branco.

A2. *Platynematichthys araguayensis* (Castelnau), ...E. & E., 187.
Habitat: Araguay.

PHRACTOCEPHALUS Agassiz.

Type: *Phractocephalus bicolor* Agassiz.
Range that of the single species.

A1. *Phractocephalus hemiliopterus* (Bloch & Schneider), ...E. & E., 188.
Phractocephalus bicolor Agassiz.
Habitat: Amazons and northward.

SCIADES Müller & Troschel.

Leiarius, Sciadichthys Bleeker.
Type: *Bagrus pictus* Müller & Troschel.
Range: Amazons and tributaries; Paraguay.

(SCIADES.)

A1. *Sciades pictus* Müller & Troschel, E. & E., 191.
Arius longibarbis Castelnau.
Habitat: Amazon; Paraguay.

(SCIADEOIDES Eigenmann & Eigenmann.)

(Type: *Sciades marmoratus* Gill.)

A2. *Sciades marmoratus* Gill, E. & E., 192.
Habitat: Marañon.

NEMUROGLANIS Eigenmann & Eigenmann.

Type: *Nemuroglanis lanceolatus* Eigenmann & Eigenmann.

A1. *Nemuroglanis lanceolatus* E. & E., E. & E., 193.
Habitat: Jutahy.

BRACHYPLATYSTOMA Bleeker.

Piramutana, Piratinga, and *Malacobagrus* Bleeker.
Type: *Platystoma vaillanti* Cuvier & Valenciennes.
Range: Parahyba through Amazons.

A1. *Brachyplatystoma filamentosum* Lichtenstein, ...Steind., 1908c, 112.
Piratinga pira-aiba Gœldi; *B. gœldii* Eigenmann & Bean; *Platystoma mucosa* Vaillant; *Platystoma verrucosum* Boulenger.
Habitat: Brazil; Para.

A2. *Brachyplatystoma piramuta* (Kner), E. & E., 186.
Habitat: Amazon and its tributaries.

A2. *Brachyplatystoma vaillanti* (Cuvier & Valenciennes), ...E. & E., 196.
Platystoma affine Cuvier & Valenciennes.
Habitat: Eastern slopes north of Rio Parahyba.

A3. *Brachyplatystoma reticulatum* (Kner), E. & E., 198.
Bagrus goliath Kner in part (the two larger specimens mentioned).
Habitat: Rio Tocantins; Amazon; Rio Madeira.

A4. *Brachyplatystoma rousseauxii* (Castelnau), ...E. & E., 198.
Bagrus goliath Kner (the type only).
Habitat: Amazon and its tributaries.

A5. *Brachyplatystoma juruense* Boulenger Boul., Trans. Zool. Soc., XIV, 421.
Habitat: Rio Jurua.

6. *Brachyplatystoma parnahybæ* Steindachner,[1] ..... St., 1908*d*, 126.
Habitat: Parnahyba.

A7. *Brachyplatystoma paraense* Steindachner, ... St., 1909*a*.
Habitat: Para.

TÆNIONEMA Eigenmann & Bean.

Type: *Tænionema steeri* E. & B.

A1. *Tænionema steeri* Eigenmann & Bean.
Habitat: Lower Amazon.

A2. *Tænionema platynema* (Boulenger), Boul., 1898, 477.
Habitat: Para.

DUOPALATINUS Eigenmann & Eigenmann.

Type: *Platystoma emarginatum* Cuvier & Valenciennes.

1. *Duopalatinus emarginatus* (Cuvier & Valenciennes), ...E. & E., 200.
Habitat: Rio San Francisco Basin.

A2. *Duopalatinus gældii* Steindachner, St., 1908*a*.
Habitat: Rio Purus.

PAULICEA von Ihering.

Type: *Paulicea jahu* v. Ihering.
Range: La Plata and Amazon Basins.

1. *Paulicea jahu* v. Ihering.
Ihering, Proc. Acad. Nat. Sci. Phila., 1898, 108.
Habitat: Rio Tiete at São Paulo.

A2. *Paulicea lütkeni* (Steindachner), E. & E., 201.
Habitat: Amazon.

STEINDACHNERIA Eigenmann & Eigenmann.

Type: *Steindachneria amblyura* Eigenmann & Eigenmann.
Range: Rios Doce, Jequitinhonha and Parahyba.

1. *Steindachneria amblyura* Eigenmann & Eigenmann, ...E. & E., 203.
Habitat: Rio Jequitinhonha.

2. *Steindachneria doceana* Eigenmann & Eigenmann, ...E. & E., 204.
Habitat: Rio Doce.

3. *Steindachneria parahybæ* Steindachner, E. & E., 204.
Habitat: Rio Parahyba.

HEMISORUBIM Bleeker.

Type: *Platystoma platyrhynchos* Cuvier & Valenciennes.

A1. *Hemisorubim platyrhynchos* (Cuvier & Valenciennes), ...E. & E., 206.
Habitat: Orinoco; Amazons; Paranahyba: Paraguay.

PSEUDOPLATYSTOMA Bleeker.

Hemiplatystoma Bleeker.

Type: *Silurus fasciatus* Linnæus.
Range: La Plata to the Magdalena.

A1. *Pseudoplatystoma fasciatum* (Linnæus), ...E. & E., 209.
Platystoma truncatum Agassiz; *Platystoma punctifer* Castelnau.
Habitat: Amazons to Rio Magdalena.

A2. *Pseudoplatystoma fasciatum nigricans* Eigenmann & Eigenmann, E. & E., 210.
Habitat: Xingu.

A3. *Pseudoplatystoma fasciatum brevifile* Eigenmann & Eigenmann, E. & E., 210.
Habitat: Goyaz.

A4. *Pseudoplatystoma fasciatum intermedium* Eigenmann & Eigenmann, E. & E., 210.
Habitat: Obidos; Rio Puty.

A5. *Pseudoplatystoma fasciatum reticulatum* Eigenmann & Eigenmann, E. & E., 211.
Habitat: Rio Negro.

A6. *Pseudoplatystoma tigrinum* (Cuvier & Valenciennes), ...E. & E., 211.
Habitat: Amazon and northward.

A7. *Pseudoplatystoma coruscans* Agassiz, E. & E., 211.

[1] *Brachyplatystoma affine* Steindachner, *non Platystoma affine* C. & V., 1908d, 128.

Sorubim caparary Spix; *Platystoma pardalis, orbignianum* Valenciennes; *Platystoma punctatum* Cuvier & Valenciennes; *Platystoma forschhammeri* Reinhardt.

Habitat: Rio de La Plata to Paraguay; Rio San Francisco Basin.

SORUBIM Spix.

Type: *Silurus lima* Bloch & Schneider.

Range that of the single species.

A1. *Sorubim lima* (Bloch & Schneider), E. & E., 213.

Sorubim infraocularis Spix; *Platystoma luceri* Weyenbergh.

Habitat: Rio de La Plata; Amazons to the Rio Magdalena.

SORUBIMICHTHYS Bleeker.

Type: *Sorubim jandia* Spix.

Range: Amazons and Orinoco.

A1. *Sorubimichthys planiceps* (Agassiz), E. & E., 215

Sorubim piranaca Spix; *Platystoma artedii* Günther; *Sorubimichthys ortoni* Gill.

Habitat: Amazon and Orinoco Basins.

A2. *Sorubimichthys spatula* (Agassiz), E. & E., 217.

Sorubim jandia Spix.

Habitat: Amazon?

A3. *Sorubimichthys gigas* (Günther), E. & E., 217.

Habitat: Huallaga.

PLATYSTOMATICHTHYS Bleeker.

Type: *Platystoma sturio* Kner.

Range that of the single species.

A1. *Platystomatichthys sturio* (Kner), E. & E., 218.

Habitat: Amazon Basin.

Subfamily DORADINÆ.

PHYSOPYXIS Cope.

Type: *Physopyxis lyra* Cope.

Range that of the single species.

A1. *Physopyxis lyra* Cope, . . E. & E., 220.

Habitat: Ambyiacu River.

DORAS Lacépède.

Pterodoras, Platydoras Bleeker; *Zathorax* Cope.

Type: *Silurus costatus* Linnæus.

Range: Rios Paraguay and Francisco to Rio Magdalena.

(LITHODORAS Bleeker.)

(Type: *Lithodoras lithogaster* Bleeker.)

A1. *Doras dorsalis* Cuvier & Valenciennes, E. & E., 225.

Doras carinatus Valenciennes, *non Silurus carinatus* Linnæus; *Doras papilionatus* Filippi; *Doras lithogaster* Heckel.

Habitat: Para; Rio Negro and Cayenne.

(DORAS Lacépède.)

A2. *Doras uranoscopus* Eigenmann & Eigenmann, ... E. & E., 228.

Habitat: Lake Hyanuary.

A3. *Doras granulosus* Valenciennes, E. & E., 229.

Doras murica Natterer.

Habitat: La Plata Basin; Amazon.

4. *Doras maculatus* Valenciennes.

Habitat: La Plata Basin.

5. *Doras longispinis* Steindachner, E. & E., 231.

Habitat: Magdalena Basin.

A6. *Doras regani* Steindachner, St., 1908.

Habitat: Para.

7. *Doras albomaculatus* Peters, E. & E., 231.

Habitat: Calabozo, Venezuela.

8. *Doras helicophilus* Günther, E. & E., 231.

Habitat: Surinam.

9. *Doras dentatus* Kner, ...E. & E., 231.
Habitat: Surinam.

10. *Doras nebulosus* Eigenmann & Kennedy, ...1903, 500.
Habitat: Paraguay Basin.

A11. *Doras costatus* (Linnæus), E. & E., 231.
Habitat: Rio San Francisco and Paraguay north to Guiana.

A12. *Doras armatulus* Cuvier & Valenciennes, ...E. & E., 234.
Habitat: Paraguay and Rio Preto to Calabozo and Huallaga.

A13. *Doras hancockii* Cuvier & Valenciennes, ...E. & E., 234.
Doras costatus Hancock, *non* Linnæus.
Habitat: Rio Cupai.

A14. *Doras brachiatus* Cope,..E. & E., 234.
Habitat: Marañon.

(ACANTHODORAS Bleeker.)

(Type: *Silurus cataphractas* Linnæus.)

A15. *Doras cataphractus* (Linnæus), E. & E., 234.
Cataphractus americanus Bloch & Schneider; *Doras blochii* Cuvier & Valenciennes; *? Doras brunneus* Schomburgk; *Doras polyramma* and *polygramma* Heckel; *Callichthys asper* Gronow.
Habitat: Central Brazil; Guiana.

A16. *Doras spinosissimus* Eigenmann & Eigenmann, ...E. & E., 235.
Habitat: Coary.

17. *Doras marmoratus* Reinhardt, E. & E., 237.
Habitat: Rio San Francisco Basin.

(AMBLYDORAS Bleeker.)

(Type: *Doras affinis* Kner.)

A18. *Doras affinis* Kner, ...E. & E., 238.
Doras truncatus Bleeker.
Habitat: Rio Branco and Rio Guaporé.

A19. *Doras weddellii* Castelnau, E. & E., 239.
Doras grypus Cope.
Habitat: Paraguay; Amazons and tributaries, chiefly westward.

(CENTROCHIR Agassiz.)

(Type: *Doras crocodili* Humboldt.)

20. *Doras crocodili* Humboldt, E. & E., 241.
Habitat: Rio Magdalena.

(AGAMYXIS Cope.)

(Type: *Doras pectinifrons* Cope.)

21. *Doras castaneo-ventris* Schomburgk, E. & E., 241.
Habitat: British Guiana.

A22. *Doras pectinifrons* Cope, E. & E., 241.
Habitat: Eastern Ecuador.

A23. *Doras flavopictus* Steindachner, St., 1908*a*.
Habitat: Iquitos.

(ASTRODORAS Bleeker.)

(Type: *Doras asterifrons* Heckel.)

A24. *Doras asterifrons* Heckel, E. & E., 241.
Habitat: Amazons and tributaries.

A25. *Doras heckelii* Kner, ..E. & E., 243.
Habitat: Solimoens.

A26. *Doras monitor* Cope, ..E. & E., 245.
Habitat: Amazon.

A27. *Doras nauticus* Cope, ..E. & E., 246.
Habitat: Nauta.

OXYDORAS Kner.

Pseudodoras and *Rhinodoras* Bleeker.
Type: *Doras niger* Valenciennes.
Range: La Plata and Paraguay; Rio San Francisco; Amazons and Guianas.

A1. *Oxydoras niger* (Valenciennes), E. & E., 247.
Doras humboldti Agassiz; *Corydoras edentatus* Spix; *Rhinodoras prion-*

mus Cope; *Rhinodoras teffeanus* Steindachner.
Habitat: Amazons and northward; Rio San Francisco.

2. *Oxydoras knerii* Bleeker, . . E. & E., 249.
Habitat: Cujaba to Asuncion on the Paraguay.

3. *Oxydoras eigenmanni* Boulenger, Boul., 1896, 28
Habitat: Paraguay Basin.

4. *Oxydoras d'orbignyi* Kröyer, E. & E., 249.
Habitat: Rio de La Plata.

A5. *Oxydoras amazonum* (Steindachner), E. & E., 250.
Habitat: Teffé.

HEMIDORAS Bleeker.

Type: *Doras stenopeltis* Kner.
Range: Rio Puty; Rio Paraguay; Amazons and Guiana.

A1. *Hemidoras trachyparia* Boulenger, Boul. 1898, 423.
Habitat: Rio Jurua.

A2. *Hemidoras nattereri* Steindachner, E. & E., 253.
Habitat: Solimoens.

3. *Hemidoras paraguayensis* Eigenmann & Ward, ...E., 1907*c*, 116.
Habitat: Rio Paraguay.

A4. *Hemidoras bachi* Boulenger, 1898, 423.
Habitat: Rio Jurua.

A5. *Hemidoras brevis* (Kner), E. & E., 254.
Habitat: Solimoens and Marañon.

A6. *Hemidoras fimbriatus* (Kner), E. & E., 255.
Habitat: Rio Guaporé.

A7. *Hemidoras punctatus* (Kner), E. & E., 255.
Habitat: Rio Guaporé.

A8. *Hemidoras lipophthalmus* (Kner), E. & E., 255.
Habitat: Rio Capin and Rio Negro.

A9. *Hemidoras stenopeltis* (Kner), E. & E., 255.
Habitat: Amazon and Solimoens.

A10. *Hemidoras trimaculatus* Boulenger, Boul., 1898, 422.
Habitat: Rio Jurua.

A11. *Hemidoras stübelii* (Steindachner), E. & E., 257.
Habitat: Huallaga.

A12. *Hemidoras morei* (Steindachner), E. & E., 257.
Habitat: Rio Negro.

A13. *Hemidoras elongatus* Boulenger, 1898, 424.
Habitat: Rio Jurua.

A14. *Hemidoras humeralis* (Kner), E. & E., 257.
Habitat: Rio Negro.

A15. *Hemidoras carinatus* (Linnæus), E. & E., 258.
Doras oxyrhynchus Valenciennes.
Habitat: Guianas; Calderon.

16. *Hemidoras microstomus* Eigenmann MS.
Habitat: Essequibo River.

(HASSAR Eigenmann & Eigenmann.)

(Type: *Oxydoras orestes* Steindachner.)
Range: Rio Puty and Amazons.

17. *Hemidoras micropœus* Eigenmann MS.
Habitat: Demarara.

18. *Hemidoras notospilus* Eigenmann MS.
Habitat: Crab Falls, Essequibo River.

19. *Hemidoras leporhinus* Eigenmann MS.
Habitat: Central British Guiana.

A20. *Hemidoras orestes* (Steindachner), E. & E., 258.
Habitat: Xingu and Huytahy.

21. *Hemidoras affinis* (Steindachner), E. & E., 258.
Habitat: Rio Puty.

A22. *Hemidoras wilderi* Kindle, Kindle, 1894, 251.
Habitat: Trocera on the Tocantins.

LEPTODORAS Boulenger.

Type: *Oxydoras acipenserinus* Günther.

Range: Xeberos to Rio Jurua.

A1. *Leptodoras acipenserinus* (Günther), E. & E., 255.

Habitat: Xeberos.

A2. *Leptodoras juruensis* Boulenger, Boul., 1898, 478.

Habitat: Rio Jurua.

3. *Leptodoras linnelli* Eigenmann MS.

Habitat: British Guiana.

Subfamily AUCHENIPTERINÆ.

ASTEROPHYSUS Kner.

Type: *Asterophysus batrachus* Kner.

Range that of the single species.

A1. *Asterophysus batrachus* Kner, E. & E., 263.

Habitat: Marabitanos.

TRACHELYOPTERICHTHYS Bleeker.

Type: *Trachelyopterus tæniatus Kner.*

Range that of the single species.

A1. *Trachelyopterichthys tæniatus* (Kner), E. & E., 263.

Habitat: Solimoens and tributaries.

TRACHELYOPTERUS Cuvier & Valenciennes.

Type: *Trachelyopterus coriaceus* Cuvier & Valenciennes.

Range: Amazons; Cayenne.

A1. *Trachelyopterus coriaceus* Cuvier & Valenciennes, ...E. & E., 264.

Habitat: Cayenne; Obidos; Porto do Moz; Paraguay.

A2. *Trachelyopterus maculosus* Eigenmann & Eigenmann, ...E. & E., 265.

Habitat: Porto do Moz.

WERTHEIMERIA Steindachner.

Type: *Wertheimeria maculata* Steindachner.

Range that of the single species.

1. *Wertheimeria maculata* Steindachner, E. & E., 265.

Habitat: Jequitinhonha.

CENTROMOCHLUS Kner.

Type: *Centromochlus megalops* Kner.

Range: Amazons and Guiana.

1. *Centromochlus oncinus* (Schomburgk), E. & E., 266.

Habitat: Rio Padauiri.

A2. *Centromochlus heckelii* (Filippi), E. & E., 267.

Centromochlus megalops Kner.

Habitat: Amazons and tributaries.

A3. *Centromochlus steindachnerii* Gill, E. & E., 268.

Habitat: Marañon.

A4. *Centromochlus intermedius* Steindachner, ...E. & E., 269.

Habitat: Amazon; Solimoens and tributaries.

A5. *Centromochlus perugiæ* Steindachner, E. & E., 270.

Habitat: Canelos.

A6. *Centromochlus aulopygius* Kner. E. & E., 270.

Habitat: Rio Guaporé; Cudajas; Essequibo.

GLANIDIUM Lütken.

Type: *Glanidium albescens* Lütken.

A1. *Glanidium albescens* Lütken, E. & E., 270.

Habitat: Coast streams from Rio Janeiro to the Amazon.

TRACHYCORYSTES Bleeker.

Type: *Trachycorystes typus* Bleeker.

Parauchenipterus Bleeker.

Range: Amazons to Guiana and Magdalena.

1. *Trachycorystes glaber* (Steindachner), E. & E., 275.

Habitat: Demarara.

A2. *Trachycorystes isacanthus* (Cope), E. & E., 275.
Habitat: Marañon.

3. *Trachycorystes insignis* (Steindachner), E. & E., 275.
Habitat: Magdalena.

4. *Trachycorystes obscurus* (Günther), E. & E., 275.
Habitat: Essequibo.

5. *Trachycorystes magdalenæ* (Steindachner), ...E. & E., 275.
Habitat: Magdalena.

6. *Trachycorystes trachycorystes* (Cuvier & Valenciennes), ...E. & E., 276.
Trachycorystes typus Bleeker.
Habitat: Brazil.

A7. *Trachycorystes ceratophysus* (Kner), E. & E., 276.
Habitat: Guaporé; Rios Negro and Branco.

A8. *Trachycorystes porosus* Eigenmann & Eigenmann, ...E. & E., 276.
Habitat: Brazil.

9. *Trachycorystes striatulus* Steindachner, E. & E., 277.
Habitat: Mouths of rivers draining eastern Minas Geraes; Paraguay.

A10. *Trachycorystes brevibarbus* (Cope), E. & E., 279.
Habitat: Marañon.

A11. *Trachycorystes galeatus* (Linnæus), E. & E., 279.
Auchenipterus maculatus, immaculatus and *punctatus* Cuvier & Valenciennes; *Auchenipterus lacustris* Lütken.
Habitat: Rio Velhas to the Orinoco and Paraguay.

12. *Trachycorystes robustus* Günther, E. & E., 281.
Habitat: Demarara.

A13. *Trachycorystes analis* Eigenmann & Eigenmann, ...E. & E., 281.
Habitat: Arary ?.

AUCHENIPTERICHTHYS Bleeker.

Type: *Auchenipterus thoracatus* Kner.
Range: Amazons and tributaries.

A1. *Auchenipterichthys thoracatus* (Kner), E. & E., 282.
Habitat: Solimoens and tributaries. (Coary; Hyarary; Guaporé.)

A2. *Auchenipterichthys longimanus* (Günther), ...E. & E., 284.
Habitat: Southern tributaries of the Amazon.

PSEUDAUCHENIPTERUS Bleeker.

Type: *Pseudauchenipterus nodosus* (Bloch.)
Felichthys Swainson.
Range: Lower courses of rivers from Jequitinhonha to Guiana.

1. *Pseudauchenipterus jequitinhonhæ* (Steindachner), ...E. & E., 286.
Habitat: Jequitinhonha.

2. *Pseudauchenipterus flavescens* Eigenmann & Eigenmann, ..E. & E., 288.
Habitat: Rio San Francisco.

A3. *Pseudauchenipterus affinis* (Steindachner), ...E. & E., 289.
Habitat: Para; mouths of streams draining eastern Minas Geraes.

A4. *Pseudauchenipterus nodosus* (Bloch), E. & E., 290.
Auchenipterus furcatus Cuvier & Valenciennes.
Habitat: Bahia; Para; Guiana.

5. *Pseudauchenipterus guppyi* Regan, 1906*c*, 387.
Habitat: Trinidad.

6. *Pseudauchenipterus pascæ* Regan, 1906*c*, 387.
Habitat: Trinidad.

EPAPTERUS Cope.

Type: *Epapterus dispilurus* Cope.
Range that of the single species.

1. *Epapterus dispilurus* Cope, E. & E., 293.
Euanemus longipinnis Steindachner.
Habitat: Upper Amazon.

AUCHENIPTERUS Cuvier & Valenciennes.

Type: *Hypophthalmus nuchalis* Spix.
Euanemus Müller & Troschel.
Range: Paraguay to Surinam.

A1. *Auchenipterus nuchalis* (Spix), E. & E., 295.
Auchenipterus dentatus Cuvier & Valenciennes; *Epapterus colymbetes* Müller & Troschel.
Habitat: Amazons; Surinam.

A2. *Auchenipterus fordicei* Eigenmann & Eigenmann, ...E. & E., 207.
Habitat: Coary.

A3. *Auchenipterus brachyurus* (Cope), E. & E., 298.
Habitat: Peru.

4. *Auchenipterus nigripinnis* (Boulenger), Boul., 1898, 280.
Habitat: Paraguay.

TETRANEMATICHTHYS Bleeker.

Type: *Ageneiosus quadrifilis* Kner.
Range that of the single species.

A1. *Tetranematichthys quadrifilis* (Kner), E. & E., 298.
Habitat: Rio Guaporé.

Subfamily AGENEIOSINÆ.

AGENEIOSUS Lacépède.

Type: *Ageneiosus armatus* Lacépède.
Ceratorhynchus Agassiz; *Hypophthalmus* Schomburgk; *Davalla* Bleeker; *Ageniosus* Günther.
Range: La Plata and its tributaries; Paranahyba northward to Guiana and westward to Peru.

1. *Ageneiosus inermis* (Linnæus), E. & E., 290.
Habitat: Surinam.

(AGENEIOSUS Lacépède.)

A2. *Ageneiosus brevis* Steindachner, E. & E., 301.
Habitat: Solimoens; Coary.

3. *Ageneiosus atronasus* Eigenmann & Eigenmann, ...E. & E., 302.
Habitat: Brazil ?.

4. *Ageneiosus valenciennesi* Bleeker, E. & E., 304.
Habitat: La Plata to Rio Puty.

5. *Ageneiosus armatus* Lacépède, E. & E., 305.
Habitat: Surinam.

A6. *Ageneiosus ucayalensis* Castelnau, E. & E., 306.
Habitat: Para; Ucayale.

7. *Ageneiosus caucanus* Steindachner, E. & E., 306.
Habitat: Cauca.

A8. *Ageneiosus dentatus* Kner, E. & E., 307.
Ageneiosus pardalis Lütken.
Habitat: Amazon; Solimoens north to Guiana and Rio Magdalena.

9. *Ageneiosus porphyreus* Cope, E. & E., 309.
Habitat: Surinam.

A10. *Ageneiosus dawalla* (Schomburgk), E. & E., 309.
Ageneiosus inermis Cuvier & Valenciennes, *non* Bloch; *Ageneiosus sebæ* Günther.
Habitat: Amazon; Guiana.

(PSEUDAGENEIOSUS Bleeker.)

(Type: *Ageneiosus brevifilis* Cuvier & Valenciennes.)

A11. *Ageneiosus brevifilis* Cuvier & Valenciennes, ...E. & E., 309.
Habitat: Amazons; Guiana; Upper Paraguay.

12. *Agenciosus axillaris* Günther, E. & E., 311.
Habitat: Surinam.

Family HYPOPHTHALMIDÆ.

HELOGENES Günther.[1]

Type: *Helogenes marmoratus* Günther.
Range that of the single species.
1. *Helogenes marmoratus* Günther, E. & E., 313.
Habitat: Essequibo.

HYPOPHTHALMUS Spix.

Type: *Hypophthalmus edentatus* Spix.
Notophthalmus Hyrtl; *Pseudohypophthalmus* Bleeker.
A1. *Hypophthalmus edentatus* Spix, E. & E., 313.
Hypophthalmus marginatus, longifilis and *spixii* Cuvier & Valenciennes; *H. edentulus* Castelnau; *H. fimbriatus* Kner; *H. perporosus* Cope.
Habitat: Amazons and tributaries, and northward.

Family PYGIDIIDÆ.

Subfamily CETOPSINÆ.

HEMICETOPSIS Agassiz.

Type: *Silurus candiru* Spix.
Range: A narrow area from Para to Ecuador.
A1. *Hemicetopsis candiru* (Spix), E. & E., 319.
Habitat: Rio Cupai to Rio Huallaga.
A2. *Hemicetopsis plumbeus* Steindachner, E. & E., 320.
Habitat: Canelos.

CETOPSIS Agassiz.

Type: *Silurus cœcutiens* Lichtenstein.
Range that of the single species.
A1. *Cetopsis cœcutiens* (Lichtenstein), E. & E., 320.
Habitat: Amazon from Gurupa to Rio Cupai; Orinoco; Irisanga.

PSEUDOCETOPSIS Bleeker.

Type: *Cetopsis gobioides* Kner.
Range: Irisanga, Marañon.
1. *Pseudocetopsis gobioides* (Kner), E. & E., 322.
Habitat: Irisanga.
A2. *Pseudocetopsis ventralis* (Gill), E. & E., 322.
Habitat: Marañon.
A3. *Pseudocetopsis macroteronema* (Boulenger), ...Boulenger, 1898, 8.
Habitat: Rio Zamora, eastern Ecuador.

CETOPSOGITON Eigenmann & Bean.

Type: *Cetopsis occidentalis* Steindachner.
1. **Cetopsogiton occidentalis** (Steindachner), ...E. & E., 322.
Habitat: Guayaquil.

Subfamily PYGIDIINÆ.

NEMATOGENYS Girard.

Type: *Trichomycterus inermis* Guichenot.
Range that of the single species.
Nematogenys inermis (Guichenot), E. & E., 323.
Nematogenys nigricans and *pallidus* Philippi.
Habitat: Central Chili.

PARIOLIUS Cope.

Type: *Pariolius armillatus* Cope.
Range that of the single species.
A1. *Pariolius armillatus* Cope, E. & E., 324.
Habitat: Ambyiacu.

[1] This genus is a member of a new family.

HATCHERIA Eigenmann.

Type: *Hatcheria patagoniensis* Eigenmann.

1. *Hatcheria patagoniensis* Eigenmann.
Habitat: Patagonia.

2. *Hatcheria macræi* (Girard), E. & E., 328.
Habitat: Uspullata.

3. **Hatcheria maculata** (Cuvier & Valenciennes), ...E. & E., 329.
Habitat: Western slopes of central Chili.

4. **Hatcheria areolata** (Cuvier & Valenciennes), ...E. & E., 330.
Habitat: Western slopes of central Chili.

PYGIDIUM Meyen.

Type: *Pygidium fuscum* Meyen.
Range: Andes from Venezuela and Colombia to Patagonia; southeastern Brazil and central Argentina; Guianas.

1. *Pygidium minutum* (Boulenger), Proc. Zool. Soc., 1891, 235.
Habitat: San Lorenzo district, Rio Grande do Sul.

A2. *Pygidium fuscum* Meyen, E. & E., 325.
Habitat: Peru.

3. **Pygidium palleum** (Philippi), E. & E., 325.
Habitat: Chili.

4. **Pygidium marmoratum** (Philippi), E. & E., 326.
Habitat: Chili.

5. *Pygidium tenue* (Weyenbergh), E. & E., 326.
Habitat: Sierra de Cordoba near Cruz-de-eje.

6. *Pygidium corduvense* (Weyenbergh), E. & E., 326.
Habitat: Rio Primero, Argentina; Bolivian Chaco.

7. **Pygidium tigrinum** (Philippi), E. & E., 326.
Habitat: Chili.

A8. *Pygidium rivulatum* (Cuvier & Valenciennes), ...E. & E., 330.
Trichomycterus incæ, gracilis, barbatula Cuvier & Valenciennes; *T. pentlandi, pictus* Castlenau.
Habitat: Titicaca; Ucayale and tributaries.

9. *Pygidium brasilicnse* (Reinhardt),[1] E. & E., 332.
Habitat: Rio Grande do Sul to Rio San Francisco and Paraguay.

10. **Pygidium poeyanum** (Cope), E. & E., 326.
Habitat: Western slopes of southern Peru.

11. *Pygidium meridæ* Regan, Regan, 1903.
Habitat: Merida and Rio Albireggas near Merida, Venezuela.

12. **Pygidium tænia** (Kner), E. & E., 333.
Habitat: Western slopes of Peruvian Andes; Rio Zamora; ? French Guiana.

13. **Pygidium laticeps** (Kner), E. & E., 334.
Habitat: Western slopes of Peruvian Andes.

A14. *Pygidium oroyæ* Eigenmann & Eigenmann, ...E. & E., 334.
Habitat: Oroya River.

15. *Pygidium schmidti* Berg, ...1897.
Habitat: Rio de Belén, Province of Catamarca, Argentina.

19. *Pygidium spegazzinii* Berg, ...1897.
Habitat: Rio de Cachi, Province Salta, Argentina.

17. *Pygidium riojanum* Berg, ...1897.
Habitat: Cordillera de la Rioja, Argentina.

A18. *Pygidium punctatissimum* (Castelnau), ...E. & E., 334.
Habitat: Araguay.

A19. *Pygidium knerii* (Steindachner), E. & E., 335.
Habitat: Eastern slopes of Ecuador; Rio Zamora.

[1] Add. *Pygidium brasiliense itatiagæ* Ribeiro, 1906, 15.

A20. *Pygidium eigenmanni* (Boulenger), Boll. Mus. Torino, XIII.
Pygidium knerii Eigenmann & Eigenmann, *non* Steindachner.
Habitat: Cumbaca.

A21. *Pygidium vittatum* (Regan), Regan, 1903.
Habitat: Marcapata Valley, Eastern Peru.

A22. **Pygidium dispar** (Tschudi), E. & E., 335.
Habitat: Eastern and western slopes of Ecuador.

23. **Pygidium punctulatum** (Cuvier & Valenciennes), ...E. & E., 336.
Habitat: Western slopes of Peruvian Andes.

24. *Pygidium burmeisteri* Berg, ...1895.
Habitat: Mendoza, Argentina.

25. *Pygidium goeldii* (Boulenger), Boul., 1896.
Habitat: Rio de Janeiro.

26. *Pygidium retropinnis* (Regan), Regan, 1903.
Habitat: St. Augustine, Andes of Colombia, 5,000 feet.

27. *Pygidium nigromaculatum* (Boulenger), ... E. & E., 336.
Habitat: Colombia.

28. **Pygidium pardus** (Cope), E. & E., 337.
Habitat: Jequetepeque; Callao Bay.

A29. *Pygidium immaculatum* Eigenmann & Eigenmann, ...E. & E., 337.
Habitat: Juiz de Fora; São Matheos; Goyaz.

A30. *Pygidium taczanowskii* (Steindachner), ...E. & E., 338.
Habitat: Rio de Huambo; Rio de Tortora.

31. *Pygidium nigricans* (Cuvier & Valenciennes), ...E. & E., 338.
Habitat: Santa Catharina.

A32. *Pygidium amazonicum* (Steindachner), ...E. & E., 338.
Habitat: Cudajàs.

33. *Pygidium borellii* (Boulenger).
Habitat: Bolivian Chaco; Salta Argentina.

34. **Pygidium quechuorum** Steindachner, St., 1902, 49.
Habitat: Arequiba, Peru.

35. *Pygidium proops* Ribeiro, Ribeiro, 1908.
Habitat: Rio Ribeira.

36. *Pygidium guianensis* Eigenmann, E., 1909, 11.
Habitat: Potaro River, British Guiana.

37. *Pygidium barbouri* Eigenmann MS.
Habitat: Rio Beni.

Eremophilus Humboldt.

Thricomycterus Humboldt; *Trachypoma* Giebel.
Type: *Eremophilus mutisii* Humboldt.
Range that of the single species.

1. *Eremophilus mutisii* Humboldt, E. & E., 274.
Trachypoma marmoratum Giebel.
Habitat: Bogota.

Tridens Eigenmann & Eigenmann.

Type: *Tridens melanops* Eigenmann & Eigenmann.
Range: Upper Amazons.

A1. *Tridens melanops* Eigenmann & Eigenmann.
Habitat: Içá.

A2. *Tridens brevis* Eigenmann & Eigenmann.
Habitat: Tabatinga.

Pseudostegophilus Eigenmann & Eigenmann.

Type: *Stegophilus nemurus* Günther.
Range that of the single species.

A1. *Pseudostegophilus nemurus* (Günther), E. & E., 341.

HENONEMUS Eigenmann & Ward.

Type: *Stegophilus intermedius* E. & E.
Range: Rio de La Plata; Amazons.

1. *Henonemus maculatus* (Steindachner), E. & E., 343.
Habitat: Rio de La Plata.

A2. *Henonemus punctatus* (Boulenger), E. & E., 343.
Habitat: Eastern Ecuador.

A3. *Henonemus intermedius* (Eigenmann & Eigenmann), ...E. & E., 343.
Habitat: Goyaz.

A4. *Henonemus macrops* (Steindachner), E. & E., 344.
Habitat: Lake Manacapuru.

HOMODIÆTUS Eigenmann & Ward.

Type: *Homodiætus anisitsi* Eigenmann & Ward.
Range that of the single species.

1. *Homodiætus anisitsi* Eigenmann & Ward, ...E., 1907*c*, 117.
Habitat: Villa Rica, Paraguay.

STEGOPHILUS Reinhardt.

Type: *Stegophilus insidiosus* Reinhardt.
Range: Rio das Velhas; Solimoens.

1. *Stegophilus insidiosus* Reinhardt, E. & E., 344.
Habitat: Rio das Velhas.

A2. *Stegophilus reinhardtii* Steindachner, E. & E., 344.
Habitat: Solimoens and tributaries.

MIUROGLANIS Eigenmann & Eigenmann.

Type: *Miuroglanis platycephalus* Eigenmann & Eigenmann.
Range that of the single species.

A1. *Miuroglanis platycephalus* Eigenmann & Eigenmann, ...E. & E., 346.
Habitat: Jutahy.

ACANTHOPOMA Lütken.

Type: *Acanthopoma annectens* Lütken.
Range that of the single species.

1. *Acanthopoma annectens* Lütken, L., 1892.
Habitat: Brazil.

VANDELLIA Cuvier & Valenciennes.

Type: *Vandellia cirrhosa* Cuvier & Valenciennes.
Range: Solimoens and Marañon and tributaries.

A1. *Vandellia cirrhosa* Cuvier & Valenciennes, ...E. & E., 345.
Habitat: Hyauary.

A2. *Vandellia plazaii* Castelnau, E. & E., 345.
Habitat: Ucayale; Calderon; Lake Hyanuary.

PAREIODON Kner.

Centrophorus Kner; *Asteromycterus* Guichenot.
Type: *Pareiodon microps* Kner.
Range that of the single species.

A1. *Pareiodon microps* Kner, E. & E., 346.
Trichomycterus pusillus Castelnau.
Habitat: Amazon and tributaries.

Family CALLICHTHYIDÆ.

SCLEROMYSTAX Günther.

Type: *Callichthys barbatus* Quoy & Gaimard.
Range that of the single species.

1. *Scleromystax barbatus* (Quoy & Gaimard), ... E. & E., 451.
Habitat: Rio Janeiro.

CALLICHTHYS Linnæus.

Type: *Callichthys asper* Quoy & Gaimard.
Range: La Plata to Trinidad.

A1. *Callichthys callichthys* Linnæus,[1] E. & E., 452.
" *Callichthys tamoata* Linnæus; *C. asper* Quoy & Gaimard; *Cataphractus depressus* Swainson; *Callichthys cœlatus* Cuvier & Valenciennes; *C. lœviceps* Cuvier & Valenciennes; *C. loricatus* Gronow; *C. kneri* Gill; *C. affinis* Günther; *C. hemiphractus* Hensel.
Habitat: La Plata to Trinidad.
2. *Callichthys arcifer* Hensel, E. & E., 455.
Habitat: Rio de Janeiro.

HOPLOSTERNUM Gill.

Type: *Callichthys lœvigatus* Valenciennes.
Range: La Plata to Trinidad.
A1. *Hoplosternum littorale* (Hancock), E. & E., 456.
Callichthys subulatus Cuvier & Valenciennes; *C. lœvigatus* Valenciennes; *C. albidus* Cuvier & Valenciennes; *Hoplosternum stewardii* Gill.
Habitat: La Plata to Trinidad.
A2. *Hoplosternum thoracatum* (Cuvier & Valenciennes), ...E. & E., 458.
Callichthys longifilis Cuvier & Valenciennes; *C. personatus* Ranzani; *C. exaratus* and *pictus* Müller & Troschel; *C. sulcatus* Kner; *C. chiquitos* Castelnau.
Habitat: Amazons and northward; Paraguay.
A3. *Hoplosternum melampterum* (Cope).
Hoplosternum pectoralis Boulenger.
Habitat: Ambyiacu.

DECAPOGON Eigenmann & Eigenmann.

Type: *Callichthys adspersus* Steindachner.
Range that of the single species.
A1. *Decapogon adspersum* (Steindachner), E. & E., 461.
Habitat: Porto do Moz; Cudajas; Tabatinga.

DIANEMA Cope.

Type: *Dianema longibarbis* Cope.
Range that of the single species.
A1. *Dianema longibarbis* Cope, E. & E., 463.
Habitat: Ambyiacu.

CHÆNOTHORAX Cope.

Type: *Chœnothorax bicarinatus* Cope.
Range: Marañon and tributary.
1. *Chœnothorax taiosh* (Castelnau), E. & E., 464.
Habitat: ?
A2. *Chœnothorax bicarinatus* Cope, E. & E., 464.
Habitat: Marañon.
A3. *Chœnothorax semiscutatus* Cope, E. & E., 464.
Habitat: Ambyiacu.

BROCHIS Cope.

Type: *Brochis cœruleus* Cope.
Range: Marañon and tributaries.
A1. *Brochis dipterus* Cope, ..E. & E., 464.
Habitat: Ambyiacu.
A2. *Brochis cœruleus* Cope, ..E. & E., 464.
Habitat: Ambyiacu.

ASPIDORAS von Ihering.

Type: *Aspidoras rochai* v. Ihering.
Range that of the single species.
1. *Aspidoras rochai* v. Ihering, v. I., 1907, 30.
Habitat: Fortaleza, Ceará.

CORYDORAS Lacépède.

Hoplisoma Swainson; *Hoplosoma* Gill; *Gasterodermis* Cope.
Type: *Corydoras geoffroy* Lacépède.

[1] Several varieties of this species may be recognizable. Regan considers *kneri* from Trinidad a distinct species.

Range: La Plata to Guiana.

A1. *Corydoras elegans* Steindachner, E. & E., 466.
Habitat: Cudajas; Teffé.

2. *Corydoras nattereri* Steindachner, E. & E., 470.
Habitat: Rio Janeiro to Rio Doce.

3. *Corydoras juquiæ* v. Ihering, v. I., 1907, 37.
Habitat: Rio Juquia, Poço Grande, São Paulo.

4. *Corydoras æneus* (Gill), ..E. & E., 471.
Habitat: Trinidad.

A5. *Corydoras armatus* (Günther), E. & E., 471.
Habitat: Marañon and tributaries.

6. *Corydoras paleatus* (Jenyns), E. & E., 471.
Corydoras marmoratus Steindachner; *Callichthys punctatus* Cuvier & Valenciennes.
Habitat: La Plata and tributaries.

A7. *Corydoras punctatus* (Bloch), E. & E., 472.
Corydoras geoffroy Lacépède; *Corydoras ambiacus* Cope.
Habitat: Guiana; Solimoens; Marañon.

8. *Corydoras eigenmanni* v. Ihering, v. I., 1907, 34.
Habitat: Cubatao and Raiz da Serra, São Paulo.

9. *Corydoras trilineatus* Cope, E. & E., 473.
Corydoras agassizii Steindachner.
Habitat: Ambyiacu.

A10. *Corydoras acutus* Cope, E. & E., 474.
Habitat: Ambyiacu.

11. *Corydoras amphibelus* Cope, E. & E., 474.
Habitat: Ambyiacu.

A12. *Corydoras hastatus* Eigenmann & Eigenmann, ...E. & E., 474.
Habitat: Villa Bella.

13. *Corydoras australis* Eigenmann & Ward, ...E., 1907*c*, 123.
Habitat: Paraguay.

14. *Corydoras microps* Eigenmann & Kennedy, ... 1903.
Habitat: Paraguay.

15. *Corydoras raimundi* Steindachner, St., 1906, 84.
Habitat: Parnahyba.

16. *Corydoras aurofrenatus* Eigenmann & Kennedy, ...E. & K., 1903.
Habitat: Paraguay.

17. *Corydoras treitlii* Steindachner, St., 1906.
Habitat: Parnahyba.

18. *Corydoras julii* Steindachner, St., 1906.
Habitat: Parahim and Parnahyba.

Osteogaster Cope.

Type: *Corydoras eques* Steindachner.
Range: Amazons.

A1. *Osteogaster eques* (Steindachner), E. & E., 466.
Habitat: Solimoens.

2. *Osteogaster splendens* (Castelnau), E. & E., 468.
Habitat: Tocantins.

Family LORICARIIDÆ.[1]

Plecostomus Gronow.

Type: *Loricaria plecostomus* Linnæus.
Range: La Plata to western Ecuador and Colombia.

A1. *Plecostomus plecostomus* (Linnæus), Regan, 205.
Hypostomus guacari Lacépède; *Loricaria flora* Shaw; *Plecostomus bicir-*

[1] The Loricariidæ, a family of South American *Nematognathi*, have recently been monographed by Regan (Transactions of the Zoological Society of London, vol. 17, pp. 191–326, 1904). The genera have been liberally lumped in this volume, and it is my opinion that for biological discussion, to show the natural

rhosus Gronow; *Hypostomus robinii* Gill; *Plecostomus brasiliensis* Bleeker; *Plecostomus seminudus* Eigenmann & Eigenmann; *Plecostomus boulengeri* Eigenmann & Kennedy.

Habitat: La Plata north to Trinidad; not in southeastern Brazil.

2. *Plecostomus commersonii* (Cuvier & Valenciennes), ...Regan, 206.

Plecostomus spiniger Hensel; *Plecostomus limosus* Eigenmann & Eigenmann; *? Plecostomus aspilogaster,* Cope.

Habitat: La Plata Basin, including Rio Grande do Sul; eastern Brazil.

3. *Plecostomus punctatus* (Cuvier & Valenciennes), ...Regan, 207. *Hypostomus subcarinatus* Castelnau;

relationships, and for the purpose of discussing the geographical distribution, it will be better to recognize a larger number of genera. My estimate of the character of these can best be expressed by the following key, in which I have followed to a very large extent the phraseology of Regan, but in which are recognized a larger number of genera than are admitted by him. The list of species is accepted with but slight modifications from Regan.

SUBFAMILIES OF LORICARIIDÆ.

a. Hæmal spines all simple; lower and fourth upper pharyngeals not toothed; anterior rudimentary ray of ventral normally shaped, but internal and directed forwards, upper part of the body protected by bony scutes.

b. Lower transverse portion of clavicles and coracoids not exposed; margin of snout naked or covered with small granular plates.

PLECOSTOMINÆ.

bb. Lower transverse portion of clavicles and coracoids exposed; margin of snout composed of more or less firm plates. HYPOPTOPOMATINÆ.

aa. Hæmal spines of the vertebræ above the anal fin bifid; lower and fourth upper pharyngeals toothed.

c. No anterior rudimentary ray of ventral; caudal peduncle elongate and strongly depressed; upper part of body with bony scutes.

LORICARIINÆ.

cc. Anterior rudimentary ray of ventral internal, plate-like; caudal peduncle cylindrical or compressed.

d. Upper part of body with bony scutes; abdomen with a large, regular, nearly square patch of small granular plates, naked at the sides and anteriorly and posteriorly.

NEOPLECOSTOMINÆ.

PLECOSTOMINÆ.

a. First scute of lower lateral series posterior to the temporal plate, with which the second is not in contact.

b. Premaxillaries nearly equal in length to the dentaries, and with about the same number of teeth.

c. Operculum and interoperculum little, and not independently movable.

d. Snout granular to its margin.

e. Adipose fin present.

f. Operculum and interoperculum not margined with bristles.

g. Body covered with plates.

1. *Plecostomus* Gronow.

gg. Body naked.

2. *Lithogenes* Eigenmann.

ff. Operculum and interoperculum with well-developed marginal bristles.

3. *Pogonopoma* Regan. (Type, *Plecostomus wertheimeri* Steind.)

ee. Adipose fin absent.

h. Operculum and interoperculum with well-developed marginal bristles.

4. *Canthopomus* Eigenmann nov.

hh. Operculum and interoperculum not margined with bristles.

5. *Rhinelepis* Spix.

hhh. Adipose replaced by a low median crest. No externally visible occipital crest.

6. *Corymbophanes* Eigenmann.

dd. Snout with a naked margin.

7. *Hemipsilichthys* Eigenmann & Eigenmann.

cc. Interoperculum more or less freely movable, usually spinate or bristly.

i. Snout granular to its margin.

j. Teeth numerous, bifid.

k. Interoperculum usually armed with slender spines with hooked apices which can be everted and completely retracted beneath the operculum.

l. Sides of head without bristles.

m. Last dorsal ray connected with the scute by an inconspicuous membrane at its base.

n. Dorsal with I, 7 or I, 8 rays.

8. *Hemiancistrus* Bleeker.

nn. Dorsal with I, 10 or I, 13 rays.

9. *Pterygoplichthys* Gill.

mm. Last dorsal ray attached by

Plecostomus punctatus Günther; *Plecostomus officinis* Steindachner; *Plecostomus commersoni, affinis* and *scabriceps* Eigenmann & Eigenmann.
Habitat: Southeastern Brazil.

well developed membrane either to the 3 or 4 scales following it, or to the spine of the adipose fin. D. I, 7. 10. *Parancistrus* Bleeker.

ll. Sides of head with slender bristles. D. I, 7. Last dorsal ray attached to the scute following it by an inconspicuous membrane at its base. 11. *Lasiancistrus* Regan.

kk. Interoperculum armed with slender spines which cannot be completely retracted beneath the operculum, or with permanently everted bristles, sides of head with bristles which are always longer in the male than in the female, and may be wanting in the latter; last dorsal ray connected by a membrane with one or two scutes following it; abdomen completely naked.

o. D. I, 7 or I, 8. 12. *Pseudancistrus* Bleeker.

oo. D. I, 9 or I, 10. 13. *Delturus* Eigenmann & Eigenmann.

jj. Teeth few, spoon-shaped.

p. Interoperculum without evertible spines. 14. *Cochliodon* Heckel.

pp. Interoperculum with some slender, evertible spines. 15. *Panaque* Eigenmann.

ii. Snout with naked margin.

q. Mouth wide, the length of mandibular ramus nearly equal to the interorbital width; naked margin of snout not very wide, without tentacles. 16. *Chætostomus* Tschudi.

qq. Mouth moderate or narrow, the length of mandibular ramus considerably less than the interorbital width.

r. Snout with a broad, naked margin, without tentacles. 17. *Xenocara* Regan. (Type, the first species, *X. latifrons* Günther.)

rr. Snout with tentacles, the naked margin broad in males, narrow in females. 18. *Ancistrus* Kner.

bb. Premaxillaries much shorter than the dentaries and with fewer teeth.

s. Premaxillaries united; body not greatly depressed. 19. *Pseudacanthicus* Bleeker.

ss. Premaxillaries not united; body much depressed. 20. *Lithoxus* Eigenmann.

aa. First two scutes of the lower lateral series below the temporal plate and in contact with it above. 21. *Acanthicus* Spix.

4. Plecostomus spinosissimus Steindachner, ...Regan, 208.
Habitat: Guayaquil, Pacific slope of Ecuador.

Hypoptopominæ.

a. Temporal plates imperforate.

b. An adipose dorsal fin. 22. *Hypoptopoma* Günther.

bb. No adipose fin. 23. *Oxyropsis* Eigenmann & Eigenmann.

aa. Temporal plates perforated like a sieve.

c. Abdomen covered with three longitudinal series of plates.

d. An adipose dorsal fin. 24. *Parotocinclus* Eigenmann & Eigenmann.

dd. No. adipose dorsal fin. 25. *Otocinclus* Cope.

cc. Abdomen naked or covered with numerous small plates, irregularly arranged. 26. *Microlepidogaster* Eigenmann & Eigenmann.

Loricariinæ.

a. Teeth in the jaws in small or moderate number, not setiform; a more or less distinct orbital notch.

b. Snout rounded or pointed, not, or not much produced. 27. *Loricaria* Linnæus.

bb. Snout produced, with a long rostrum.

c. Snout expanded at tip. 28. *Hemiodontichthys* Bleeker.

cc. Snout pointed, not expanded at tip. 29. *Reganella* Eigenmann.

aa. Teeth in the jaws numerous, setiform; orbit circular, without distinct notch.

d. Dorsal opposite to the ventrals.

e. Snout rounded or pointed, not produced as a rostrum; lateral keels obsolete. 30. *Harttia* Steindachner.

ee. Snout produced, forming a distinct rostrum; sides of the head in the male margined with bristles. 31. *Sturisoma* Swainson.

dd. Dorsal opposite to the anal; snout very long, body very slender. 32. *Farlowella* Eigenmann & Eigenmann.

Neoplecostominæ.

a. Elongate; upper part of body enclosed in bony scutes; eyes small, teeth bifid, in a single series; an adipose fin. 33. *Neoplecostomus* Eigenmann & Eigenmann.

5. **Plecostomus festæ** Boulenger, Regan, 208.
Habitat: Pacific slope of Ecuador.

A6. *Plecostomus verres* (Cuvier & Valenciennes), ...Regan, 209.
Hypostomus plecostomus C. & V., *non* L.?; *Hypostomus pantherinus* Kner; *Plecostomus bicirrhosus* (part) Günther.
Habitat: Venezuela; Guiana; Marajo Island.

A7. *Plecostomus carinatus* Steindachner, Regan, 209.
Habitat: Amazon.

8. *Plecostomus tietensis* v. Ihering, v. Ihering, 1907, 559.
Habitat: Rio Tiete, São Paulo, Brazil.

9. *Plecostomus vaillanti* Steindachner, Regan, 210.
Habitat: Paraguay, Rio Preto; Rio Puty; San Gonçallo.

10. *Plecostomus laplatæ* Eigenmann, E., 1907.
Habitat: La Plata.

A11. *Plecostomus emarginatus* (Cuvier & Valenciennes), ...Regan, 210.
Hypostomus squalium Schomburgk; *Plecostomus scopularius, biseriatus, virescens* Cope; *Plecostomus villarsi* Lütken; *Pl. annæ* Steindachner.
Habitat: Amazons to Orinoco.

12. *Plecostomus tenuicauda* Steindachner, Steindachner, 1878, 40
Habitat: Magdalena and tributaries.

A13. *Plecostomus alatus* (Castelnau), Regan, 211.
Plecostomus francisci Lütken.
Habitat: Araguay and San Francisco.

14. *Plecostomus regani* v. Ihering, 558.
Habitat: Rio Piracicaba, São Paulo, Brazil.

15. *Plecostomus cordovæ* Günther, Regan, 212.
Habitat: Cordova.

16. *Plecostomus borellii* Boulenger, Regan 212.
Habitat: Bolivia.

17. *Plecostomus paulinus* v. Ihering, v. I., 1907, 560.
Habitat: Piracicaba, São Paulo, Brazil.

A18. *Plecostomus latirostris* Regan, Regan, 213.
Plecostomus pantherinus Boulenger, *non* Kner.
Habitat: Goyas and Rio Jungada, Matto Grosso.

19. *Plecostomus ternetzi* Boulenger, Regan, 213.
Habitat: Paraguay.

20. *Plecostomus macrops* Eigenmann & Eigenmann, ...Regan, 214.
Habitat: Rio das Velhas.

21. *Plecostomus hermanni* v. Ihering, v. I., 1907, 560.
Habitat: Rio Piracicaba, São Paulo, Brazil.

22. *Plecostomus garmani* Regan, Regan, 214.
Plecostomus lima Eigenmann & Eigenmann, *non* Lütken.
Habitat: Rio San Francisco; Rio das Velhas; Rio Grande do Sul.

A23. *Plecostomus atropinnis* Eigenmann & Eigenmann, ...Regan, 215.
Habitat: Goyaz.[1]

24. *Plecostomus robinii* Cuvier & Valenciennes, ...Regan, 215.
Habitat: Montevideo; Trinidad.

25. *Plecostomus unæ* Steindachner, Regan, 215.
Plecostomus robinii Günther and Eigenmann & Eigenmann, *non* C. & V.
Habitat: Bahia.

26. *Plecostomus wuchereri* Günther, Regan, 216.
Plecostomus brevicauda Günther; *Pl.*

[1] If, as Regan thinks, this species or variety is identical with *garmani* the species should of course go by the older name *atropinnis*.

lima Lütken; *Pl. vermicularis* Eigenmann & Eigenmann.
Habitat: Bahia and Rio San Francisco, Paraguay.

27. *Plecostomus lütkeni* Steindachner, Regan, 217.
Plecostomus lima Steindachner, *non* Lütken.
Habitat: Southeastern Brazil.

28. *Plecostomus auroguttatus* (Kner), Regan, 217.
Hypostomus asperatus Castelnau, *Plecostomus johnii* Steindachner.
Habitat: Southeastern Brazil.

29. *Plecostomus obtusirostris* Steindachner, St., 1907*a*, 490.
Habitat: Cubatao.

A30. *Plecostomus unicolor* Steindachner, St., 1908*f*, 164.
Habitat: Rio Purus.

31. *Plecostomus hemiurus* Eigenmann MS.
Habitat: British Guiana.

A32. *Plecostomus horridus* (Kner), Regan, 1908*b*, 795.
Habitat: Rio Guaporé.

33. *Plecostomus iheringii* Regan, Regan, 1908*b*, 795.
Habitat: Piracicaba.

34. *Plecostomus margaretifer* Regan, Regan, 1908*b*, 796.
Habitat: Piracicaba.

35. *Plecostomus strigaticeps* Regan, Regan, 1908*b*, 796.
Habitat: Piracicaba.

36. *Plecostomus albopunctatus* Regan, Regan, 1908*b*, 797.
Habitat: Piracicaba.

A37. *Plecostomus goyazensis* Regan, Regan, 1908*b*, 798.
Plecostomus latirostris part Regan.
Habitat: Goyaz.

POGONOPOMA Regan.

Type: *Plecostomus wertheimeri* Steindachner.
Range that of the single species.

1. *Pogonopoma wertheimeri* (Steindachner), ...Regan, 218.
Habitat: Santa Clara, southeastern Brazil.

CANTHOPOMUS Eigenmann, genus novum.

Type: *Rhinelepis genibarbis* Cuvier & Valenciennes.
Range: Amazons.

A1. *Canthopomus pellegrini* (Regan), Regan, 218.
Habitat: Upper Amazon.

A2. *Canthopomus genibarbis* (Cuvier & Valenciennes), ...Regan, 218.
Rhinelepis agassizii Steindachner.
Habitat: Amazon.

RHINELEPIS Spix.

Type: *Rhinelepis aspera* Spix.
Range: Parahyba; Parana and San Francisco.

1. *Rhinelepis parahybæ* Steindachner, Regan, 219.
Habitat: Rio Parahyba.

2. *Rhinelepis aspera* Spix, ...Regan, 220.
Rhinelepis strigosa Cuvier & Valenciennes.
Habitat: Parana and San Francisco.

3. *Rhinelepis microps* v. Ihering, v. I., 1907, 24.
Habitat: Piquete, São Paulo.

HEMIPSILICHTHYS Eigenmann & Eigenmann.

? Kroniichthys Ribeiro.
Type: *Xenomystus gobio* Lütken.
Range: Parahyba to Santa Catharina.

1. *Hemipsilichthys gobio* (Lütken), Regan, 221.
Plecostomus heylandii Boulenger.
Habitat: Rio Parahyba, Santos.

2. *Hemipsilichthys calmoni* Steindachner, St., 1907, 82.

? Kronichthys subteres Ribeiro; *N. duseni, Hemipsilichthys cameroni* St.
Habitat: Santa Catharina.

HEMIANCISTRUS Bleeker.

Type: *Ancistrus medians* Kner.
Range: Amazons north to Veragua; Para to western Ecuador and Pacific side of Panama.

1. **Hemiancistrus annectens** (Regan), Regan, 225.
Habitat: St. Javier and Rio Durango; northwestern Ecuador.
2. *Hemiancistrus medians* (Kner), Regan, 229.
Habitat: Surinam.
3. **Hemiancistrus aspidolepis** (Günther), Regan 230.
Habitat: Veragua, Pacific slope of Panama.

A4. *Hemiancistrus brachyurus* (Kner), Regan, 231.
H. pictus of Kner, Günther and Eigenmann, *non* Castelnau.
Habitat: Rio Negro.

A5. *Hemiancistrus scaphirhynchus* (Kner), Regan, 231.
Habitat: Amazons.

A6. *Hemiancistrus oligospilus* (Günther), Regan, 232.
Habitat: Rio Capin.

A7. *Hemiancistrus vittatus* (Steindachner), Regan, 232.
Habitat: Amazons; Paraguay.

A8. *Hemiancistrus bachii* (Boulenger), Regan, 233.
Habitat: Rio Jurua.

9. *Hemiancistrus schomburgki* (Günther), Regan, 233.
Habitat: British Guiana.

10. *Hemiancistrus bovallii* Regan, Regan, 1906, 96.
Habitat: Upper Potaro, British Guiana.

11. *Hemiancistrus megacephalus* (Günther), ...Regan, 234.
? Hypostomus itacua Cuvier & Valenciennes; *Chætostomus macrops* Lütken.
Habitat: Guiana.

A12. *Hemiancistrus platycephalus* (Boulenger), ...Regan, 235.
Habitat: Eastern Ecuador.

PTERYGOPLICHTHYS Gill.

Type: *Hypostomus duodecimalis* Cuvier & Valenciennes.
Range: Paraguay to Magdalena.

1. *Pterygoplichthys undecimalis* (Steindachner), ...Regan, 226.
Habitat: Rio Magdalena.

2. *Pterygoplichthys etentaculatus* (Spix), Regan, 226.
Hypostomus duodecimalis Cuvier & Valenciennes; *Ancistrus longimanus* Kner.
Habitat: Rio San Francisco.

A3. *Pterygoplichthys gibbiceps* (Kner), Regan, 227.
Liposarcus altipinnis Günther; *Liposarcus scrophus* Cope.
Habitat: Amazons from Gurupa to Nauta.

A4. *Pterygoplichthys lituratus* (Kner), Regan, 227.
Habitat: Eastern Brazil; Rio Guaporé and Amazons.

A5. *Pterygoplichthys multiradiatus* (Hancock), ...Regan, 228.
Hypostomus pardalis Castelnau; *Liposarcus varius, Liposarcus jeanesianus* Cope.
Habitat: Amazons and Guiana; Paraguay.

6. *Pterygoplichthys anisitsi* Eigenmann & Kennedy, ...Regan, 229.
Ancistrus multiradiatus alternans Regan.
Habitat: Paraguay and southern Bolivia.

A7. *Pterygoplichthys punctatus* Günther, Regan, 229.
Ancistrus duodecimalis Kner, *non* Cuvier & Valenciennes.
Habitat: Amazons; Venezuela.
8. *Pterygoplichthys juvens* Eigenmann & Kennedy, ...E. & K., 1903.
Habitat: Paraguay. Probably young of *anisitsi*.
9. *Pterygoplichthys gigas* (Boulenger), Regan, 230.
Habitat: Paraguay.

PARANCISTRUS Bleeker.

Type: *Hypostomus aurantiacus* Castelnau.
Range: Amazon Basin.
A1. *Parancistrus niveatus* (Castelnau), Regan, 235.
Hemiancistrus longipinnis Kindle.
Habitat: Araguay; Tocantins.
A2. *Parancistrus punctatissimus* (Steindachner), ...Regan, 236.
Habitat: Amazon.
A3. *Parancistrus aurantiacus* (Castelnau), Regan, 236.
Hypostomus nigricans Castelnau; *Hypostomus vicinus* Castelnau.
Habitat: Peruvian Amazon.

LASIANCISTRUS Regan.

Type: *Chætostomus heteracanthus* Günther.
Range: Peruvian Amazon and Venezuela.
A1. *Lasiancistrus heteracanthus* (Günther), ...Regan, 237.
Habitat: Peruvian Amazon.
A2. *Lasiancistrus pictus* (Castelnau), Regan, 237.
Habitat: Ucayale.
3. *Lasiancistrus mystacinus* (Kner), Regan, 238.
Habitat: Caracas.
4. *Lasiancistrus guacharote* (Cuvier & Valenciennes), ...Regan, 238.
? Chætostomus trinitatis Günther.
Habitat: Said to be Porto Rico.

PSEUDANCISTRUS Bleeker.

Type: *Hypostomus barbatus* Cuvier & Valenciennes.
Range: Colombia to Guiana.
1. *Pseudancistrus setosus* (Boulenger), Regan, 239.
Habitat: Colombia.
A2. *Pseudancistrus barbatus* (Cuvier & Valenciennes), ...Regan, 240.
Hypostomus guttatus Cuvier & Valenciennes.
Habitat: Guiana; Paraguay.
3. *Pseudancistrus depressus* (Günther), Regan, 240.
Habitat: Surinam.
4. *Pseudancistrus güntheri* (Regan), Regan, 241.
Plecostomus guttatus Günther, *non* Cuvier & Valenciennes.
Habitat: British Guiana.
5. *Pseudancistrus nigrescens* Eigenmann MS.
Habitat: Potaro River.

DELTURUS Eigenmann & Eigenmann.

Type: *Delturus parahybæ* E. & E.
Range: Southeastern Brazil.
1. *Delturus angulicauda* (Steindachner), Regan, 241.
Habitat: Southeastern Brazil.
2. *Delturus parahybæ* Eigenmann & Eigenmann, ...Regan, 241
Habitat: Rio Parahyba.

COCHLIODON Heckel.

Type: *Cochliodon hypostomus* Heckel =*Hypostomus cochliodon* Kner.
Range that of the single species.
A1. *Cochliodon cochliodon* (Kner), Regan, 242.

Cochliodon hypostomus Heckel; *Loricaria melanoptera* Natterer.
Habitat: Amazon to Paraguay.

PANAQUE Eigenmann & Eigenmann.

Type: *Chætostomus nigrolineatus* Peters.
Range: Goyaz to Xeberos and Magdalena.

A1. *Panaque dentex* (Günther), Regan, 243.
Habitat: Xeberos.

2. *Panaque cochliodon* (Steindachner), Regan, 243.
Chætostomus gibbosus Steindachner and *Panaque gibbosus* Regan.
Habitat: Magdalena Basin.

A3. *Panaque nigrolineatus* (Peters), Regan, 244.
Habitat: Goyaz; Venezuela.

CHÆTOSTOMUS Tschudi.

Type: *Chætostomus loborhynchus* Tschudi.
Range: Mountains north of Peru to Panama and Venezuela.

1. **Chætostomus loborhynchus** Tschudi, Regan, 246.
Habitat: Andes of western Peru.

A2. *Chætostomus marcapatæ* Regan, Regan, 246.
Habitat: Marcapata Valley, eastern Peru.

A3. *Chætostomus brevis* Regan, Regan, 246.
Habitat: Rios Bomboiza and Zamora, eastern Peru.

A4. *Chætostomus taczanowskii* Steindachner, ...Regan, 247.
Habitat: Rios Huambo and Tortora, eastern Peru.

A5. **Chætostomus dermorhynchus** Boulenger, ...Regan, 248.
Habitat: Eastern and western Ecuador

6. **Chætostomus fischeri** Steindachner, Regan, 248.
Habitat: Rio Mamoni near Chepo.

8. *Chætostomus stanii* Lütken, Regan, 248.
Habitat: Puerto Cabello, Venezuela.

9. *Chætostomus guairensis* Steindachner, Regan, 249.
Habitat: Caracas, Venezuela.

10. **Chætostomus marginatus** Regan, Regan, 249.
Chætostomus microps Boulenger, *non* Günther.
Habitat: Salidero, northwest Ecuador.

A11. *Chætostomus branickii* Steindachner, Regan, 250.
Habitat: Callacate, eastern Peru.

12. *Chætostomus anomalus* Regan, Regan, 250.
Habitat: Merida and neighboring mountains, Venezuela.

13. *Chætostomus thomsoni* Regan, Regan, 250.
Habitat: Villeta, Colombia.

14. *Chætostomus nudirostris* Lütken. Regan, 251.
Habitat: Valencia, Venezuela.

15. **Chætostomus microps** Günther, Regan, 251.
Hypostomus erinaccus Günther, *non* Cuvier & Valenciennes.
Habitat: Western slope of Ecuador.

XENOCARA Regan.

Type: *Chætostomus latifrons* Günther.
Range: Peru to Guiana.

A1. *Xenocara latifrons* (Günther), Regan, 253.
Habitat: Peruvian Amazon.

A2. *Xenocara gymnorhynchus* (Kner), Regan, 254.
? Hypostomus nudiceps Müller & Troschel.
Habitat: Venezuela and Guiana; Paraguay.

ANCISTRUS Kner.[1]

Thysanocara Regan.

Type: *Ancistrus cirrhosus* Kner.

Range: Paraguay to Rio Chagres; Rio Grande do Sul.

A1. *Ancistrus dolichopterus* Kner, Regan 254.

Ancistrus temminckii E. & E., *non* Cuvier & Valenciennes.

Habitat: Amazon; Guiana.

2. *Ancistrus temminckii* (Cuvier & Valenciennes), ...Regan, 254.

Habitat: Guiana.

A3. *Ancistrus hoplogenys* (Günther), Regan, 255.

Chætostomus leucostictus Günther; *Chætostomus alga, malacops, tectirostris* Cope.

Habitat: Guiana, Amazons and Paraguay.

A4. *Ancistrus cirrhosus* (Cuvier and Valenciennes), ...Regan, 256.

Chætostomus variolus Cope.

Habitat: Trinidad; Guiana; Amazons; Paraguay; Rio Grande do Sul.

Ancistrus ancistrus dubius Eigenmann & Eigenmann, ...E. 446.

Habitat: Amazons.

5. *Ancistrus chagresi* Eigenmann & Eigenmann, ...Regan, 256.

Habitat: Rio Chagres.

6. *Ancistrus rothschildi* (Regan), Regan, 1905.

Habitat: Puerto Cabello, Venezuela.

A7. *Ancistrus occidentalis* (Regan), Regan, 257.

Habitat: Canelos, eastern Ecuador.

8. *Ancistrus brevipinnis* (Regan), Regan, 257.

Habitat: Rio Grande do Sul; Theresopolis.

A9. *Ancistrus montanus* (Regan), Regan, 258.

Habitat: Eastern Andes of Bolivia.

A10. *Ancistrus bufonius* (Cuvier & Valenciennes), ...Regan, 258.

Hypostomus calamita Cuvier & Valenciennes; *Chætostomus jelskii* Steindachner.

Habitat: Eastern Andes of Peru and Bolivia.

A11. *Ancistrus stigmaticus* Eigenmann & Eigenmann, ...Regan, 259.

Habitat: Goyaz to San Matheos.

12. *Ancistrus lithurgicus* Eigenmann MS.

Habitat: Crab Falls, Essequibo River.

[1] Doubtful species of this genus are *Chætostomus sericeus* Cope and *Hypostomus erinaceus* C. & V.

Kner (1853) described the genus *Ancistrus* to include many species, which he divides into the two groups, *Brachypteri*, D. I, 7–I, 9, and *Macropteri*, D. I, 11–I, 13.

Gill (1859) separated the Macropteri under the name *Pterygoplichthys*, saying: "The genus *Ancistrus* seems to have been framed with special regard to those fishes to which the name is here restricted, and is by Dr. Kner divided into two sections, which correspond to *Ancistrus* and *Pterygoplichthys*, his section *a* answering to the former genus and *b* to the latter."

The species known to Kner and included in his Brachypteri are: *Hypostomus cirrhosus* C. & V., *Ancistrus dolichopterus* Kner, *Ancistrus gymnorhynchus* Kner, *Ancistrus mystacinus* Kner, *Ancistrus pictus* Kner, *Ancistrus brachyurus* Kner, *Ancistrus scaphirhynchus* Kner. There can be no mistake as to what Gill meant.

Gill redescribed the genus *Ancistrus*, not to restrict it, but as he described or redescribed all of the other genera of fresh-water fishes from Trinidad.

His description of *Ancistrus* was either drawn from his specimens of *guacharote* or from Cuvier & Valencienne's (XV, 508) description of *guacharote*. *Guacharote* was known to Kner only through C. & V.'s description and on account "der Ungenauigkeit der Beschreibung", he was unable to place it with certainty. He thought it might be his *mystacinus*.

Regan considers *guacharote* as belonging to his new subgenus *Lasiancistrus*. But because Gill's wording of the description applies only to *brachyurus* and *scaphirhynchus* (and *medians*) of Kner, Regan considers the latter typical of *Ancistrus*. Gill's *diagnosis* based on *guacharote*, a species not known to Kner and at least subgenerically distinct from *brachyurus* and *scaphirhynchus*, can have no bearing whatever on the restriction of *Ancistrus*.

Fortunately Bleeker definitely restricted the name to Kner's first species, *cirrhosus*.

PSEUDACANTHICUS Bleeker.

Type: *Hypostomus serratus* Cuvier & Valenciennes.

Range: Amazon to Surinam.

1. *Pseudacanthicus serratus* (Cuvier & Valenciennes), ...Regan, 260.

Habitat: Surinam.

A2. *Pseudacanthicus spinosus* (Castelnau), Regan, 260.

Habitat: Amazon.

3. *Pseudacanthicus fordii* (Günther), Regan, 261.

Habitat: Surinam.

A4. *Pseudacanthicus hystrix* (Cuvier & Valenciennes), ...Regan, 261.

Habitat: Rio Negro.

LITHOXUS Eigenmann MS.

Type: *Lithoxus lithoides* Eigenmann.

Range that of the single species.

1. *Lithoxus lithoides* Eigenmann MS.

Habitat: Cataracts of British Guiana.

ACANTHICUS Spix.

Type: *Acanthicus hystrix* Spix.

Range that of the single species.

A1. *Acanthicus hystrix* Spix, Regan, 262.

Rhinelepis acanthicus Cuvier & Valenciennes.

Habitat: Amazon; Guiana.

HYPOPTOPOMA Günther.

Type: *Hypoptopoma thoracatum* Günther.

Range: Upper Amazon.

A1. *Hypoptopoma thoracatum* Günther, Regan, 263.

Hypoptopoma bilobatum Cope.

Habitat: Upper Amazon.

A2. *Hypoptopoma joberti* (Vaillant), Regan, 265.

Otocinclus bilobatus Steindachner, *non* Cope.

Habitat: Upper Amazon; Jurua.

Hypoptopoma steindachneri Boulenger.

A3. *Hypoptopoma thoracatum* Steindachner, *non* Günther.

Habitat: Amazons.

A4. *Hypoptopoma gulare* Cope, Regan, 265.

Habitat: Upper Amazon.

OXYROPSIS Eigenmann & Eigenmann.

Aristomata Holmberg.

Type: *Oxyropsis wrightiana* Eigenmann & Eigenmann = *Hypostomus carinatus* Steindachner.

Range: Upper Amazon and Paraguay.

A1. *Oxyropsis carinatus* (Steindachner), Regan, 264.

Oxyropsis wrightiana E. & E.

Habitat: Upper Amazon.

2. *Oxyropsis inexpectatus* (Holmberg), Regan, 264.

Oxyropsis güntheri (Boulenger),

Habitat: Paraguay.

OTOCINCLUS Cope.

Hisonotus Eigenmann & Eigenmann.

Type: *Otocinclus vestitus* Cope.

Range: Southeastern Brazil, Paraguay and Ambyiacu.

1. *Otocinclus affinis* Steindachner, Regan, 267.

Habitat: Santa Cruz.

2. *Otocinclus vittatus* Regan, . . Regan, 267.

Habitat: Paraguay.

A3. *Otocinclus vestitus* Cope, . . Regan, 267.

Habitat: Ambyiacu.

4. *Otocinclus flexilis* Cope, ...Regan, 267.

Otocinclus fimbriatus Cope.

Habitat: Rio Grande do Sul.

5. *Otocinclus leucofrenatus* Ribeiro, Ribeiro, 1908.

Habitat: Ribeira.

6. *Otocinclus notatus* (Eigenmann & Eigenmann), ...Regan, 268.

Habitat: Santa Cruz.

7. *Otocinclus gibbosus* Ribeiro, Ribeiro, 1908.
Habitat: Ribeira.

8. *Otocinclus tietensis* v. Ihering, v. I., 1907, 26.
Habitat: Tieté.

9. *Otocinclus paulinus* Regan, Regan, 1907, 799.
Habitat: Piracicaba.

10. *Otocinclus arnoldi* Regan, Regan, 1909, 235.
Habitat: La Plata.

PAROTOCINCLUS Eigenmann & Eigenmann.

Type: *Otocinclus maculicauda* Steindachner.
Range that of the single species.

1. *Parotocinclus maculicauda* (Steindachner), ...Regan, 268.
Habitat: Santa Cruz to Ribeira.

MICROLEPIDOGASTER Eigenmann & Eigenmann.

Type: *Microlepidogaster perforatus* Eigenmann & Eigenmann.
Range: Southeastern Brazil.

1. *Microlepidogaster nigricauda* (Boulenger), ...Regan, 268.
Hisonotus lævior and *leptochilus* Cope.
Habitat: Rio Grande do Sul.

2. *Microlepidogaster perforatus* Eigenmann & Eigenmann, ...Regan, 269.
Habitat: Rio Grande do Sul.

3. *Microlepidogaster lophophanes* (Eigenmann & Eigenmann), ..Regan, 269.
Habitat: Santa Cruz.

LORICARIA Linnæus.

Type: *Loricaria dura* Linnæus = *Loricaria cataphracta* Linnæus.
Parahemiodon, Hemiloricaria and *Pseudohemiodon* Bleeker.
Range: La Plata to Panama and western Ecuador; all streams.

(RHINELORICARIA Bleeker.)

(Type: *Loricaria lima* Kner.)

1. *Loricaria filamentosa* Steindachner, Regan, 274.
Habitat: Rio Magdalena; Berbice.

2. *Loricaria nigricauda* Regan, Regan, 275.
Habitat: Porto Real, Province Rio de Janeiro.

3. *Loricaria parva* Boulenger, Regan, 276.
Habitat: Paraguay.

A4. *Loricaria phoxocephala* Eigenmann & Eigenmann, ...Regan, 276.
Habitat: Solimoens and Parana; Paraguay.

A5. *Loricaria lanceolata* Günther, Regan, 277.
Habitat: Xeberos and Canelos.

6. **Loricaria jubata** Boulenger, Regan, 278.
Habitat: Northwest Ecuador (St Javier, 60 feet; Rio Durango, 350 feet).

7. **Loricaria uracantha** Kner & Steindachner, ...Regan, 278.
Habitat: Atlantic and Pacific slope of Panama.

8. *Loricaria magdalenæ* Steindachner, Regan, 279.
Habitat: Rio Magdalena.

9. *Loricaria cadeæ* Hensel[1]...Regan, 279.
Habitat: Rio Cadea; Rio Grande do Sul.

A10. *Loricaria teffeana* Steindachner, Regan, 280.
Habitat: Solimoens and tributaries.

11. *Loricaria catamarcensis* Berg, Regan, 280.
Habitat: Bolivia; Argentina.

A12. *Loricaria konopickyi* Steindachner, Regan, 281.
Habitat: Rio Janeiro; Amazon.

13. *Loricaria steindachneri* Regan, Regan, 281.

[1] According to Steindachner this is the female of *L. lima*.

Loricaria lima Steindachner, *non* Kner.
Habitat: Rio Preto to Rio Parahyba.

A14. **Loricaria lima** Kner, ...Regan, 282.
Habitat: Rio Parahyba to Para; both slopes of Panama.

15. *Loricaria lima microlepidota* Steindachner, ... St., 1907*b*.
Habitat: Rio Jurua.

16. *Loricaria strigilata* Hensel, Regan, 283.
Habitat: Rio Grande do Sul.
Loricaria henselii Steindachner.
Habitat: Cubatao.

17. *Loricaria microlepidogaster* Regan, Regan, 283.
Habitat: Rio Grande do Sul.

18. *Loricaria cubatoensis* Steindachner, St., 1907*g*, 489.
Habitat: Cubatao.

19. *Loricaria latirostris* Boulenger, Regan, 283.
Loricaria paulina Boulenger.
Habitat: Rio Mogy-guassu, about 250 miles inland from Santos.

20. *Loricaria steinbachi* Regan, Regan, 1906, 97.
Habitat: Salta, Argentina

21. *Loricaria jaraguensis* Steindachner, St., 1909a
Habitat: Santa Catharina.

(PSEUDOLORICARIA Bleeker.)

(Type: *Loricaria lævissima* Cuvier & Valenciennes.)

A22. *Loricaria lævissima* Cuvier & Valenciennes, ...Regan, 284.
Habitat: Amazons.

A23. *Loricaria punctata* Regan, Regan, 285.
Habitat: Porto do Moz to Barro do Rio Negro.

(LORICARIICHTHYS Bleeker.)

(Type: *Loricaria maculata* Bloch.)

A24. *Loricaria maculata* Bloch, Regan, 286.
Loricaria amazonica Castelnau.
Habitat: Amazons; Guiana; Paraguay.

A25. *Loricaria typus* Bleeker, Regan, 286.
Loricaria parahemiodon Günther; *Loricaria valenciennesi* Vaillant; *Loricaria stübellii* Steindachner.
Habitat: Surinam; Amazons; Paraguay.

A26. *Loricaria acuta* Cuvier & Valenciennes, ...Regan, 287.
? Loricaria castanea Castelnau.
Habitat: Amazon; Rio de Janeiro.

A27. *Loricaria nudirostris* Kner, Regan, 288.
Habitat: Rio Negro.

28. *Loricaria labialis* Boulenger, Regan, 288.
Habitat: Paraguay.

29. *Loricaria spixii* Steindachner, Regan, 289.
Habitat: Southeastern Brazil.

30. *Loricaria anus* Cuvier & Valenciennes, Regan, 289.
Habitat: La Plata and Rio Grande do Sul.

31. *Loricaria microdon* Eigenmann.
Habitat: Rupununi River, British Guiana.

32. *Loricaria grisea* Eigenmann.
Habitat: Essequibo River.

33. *Loricaria submarginata* Eigenmann.
Habitat: Potaro Basin.

A34. *Loricaria stewarti* Eigenmann.
Habitat: Chipoo Creek, Rio Branco Basin.

(LORICARIA Linnæus.)

35. *Loricaria evansii* Boulenger, Regan, 290.
Habitat: Rio Jungada, Matto Grosso, Brazil.

36. *Loricaria nudiventris* Cuvier & Valenciennes, ...Regan, 290.
Habitat: Rio San Francisco.

37. *Loricaria macrops* Regan, Regan, 290.
Habitat: Rio de La Plata.

A38. *Loricaria cataphracta* Linnæus, Regan, 291.
Loricaria cirrhosa Bloch & Schneider; *Loricaria setifer* Lacépède; *Plecostomus flagellaris* Gronow; *Loricaria dura* Bleeker.
Habitat: Amazons; Guiana; Paraguay.

A39. *Loricaria parnahybæ* Steindachner, St., 1907.
Habitat: Rio Parnahyba.

A40. *Loricaria carinata* Castelnau, Regan, 292.
Loricaria lata Eigenmann & Eigenmann.
Habitat: Rio Jurua; Rio Paraguay; Matto Grosso; Goyaz.

A41. *Loricaria similima* Regan, Regan, 292.
Loricaria filamentosa Boulenger, *non* Steindachner.
Habitat: Canelos, East Ecuador.

42. *Loricaria apeltogaster* Boulenger, Regan, 292.
Habitat: Paraguay.

43. *Loricaria macrodon* Kner, Regan, 293.
Habitat: Rio Cuyaba.

44. *Loricaria piracicabæ* v. Ihering, v. I., 1907, 28.
Habitat: Piracicaba.

45. *Loricaria vetula* Cuvier & Valenciennes, ...Regan, 293.
Habitat: La Plata; Rio Janeiro.

46. *Loricaria variegata* Steindachner, Regan, 293.
Habitat: Rio Mamoni, near Chepo, Panama.

A47. *Loricaria macromystax* Günther, Regan, 294.
Habitat: Peruvian Amazon.

A48. *Loricaria lamina* Günther, Regan, 294.
Habitat: Peruvian Amazon.

49. *Loricaria laticeps* Regan, Regan, 295.
Loricaria lamina Boulenger, *non* Günther.
Habitat: Paraguay.

50. *Loricaria platycephala* (Kner).
Habitat: Rio Cuyaba.

51. *Loricaria brunnea* Hancock.
Habitat: British Guiana.

Doubtful species are the following:

52. *Loricaria platyura* Müller & Troschel.
Habitat: Rupununi.

53. *Loricaria caracasensis* Bleeker.
Habitat: Caracas.

54. *Loricaria bransfordi* Gill.
Habitat: Panama.

Hemiodontichthys Bleeker.

Type: *Hemiodon acipenserinus* Kner.
Range that of the single species.

A1. *Hemiodontichthys acipenserinus* (Kner), ...Regan, 296.
Habitat: Amazon and Paraguay.

Reganella Eigenmann.

Type: *Hemiodon depressus* Kner.
Range that of the single species.

1. *Reganella depressa* (Kner), Regan, 296.
Habitat: Rio Negro.

Harttia Steindachner.

Type: *Harttia loricariiformis* Steindachner.
Range: southeastern Brazil; Solimoens and Surinam.

1. *Harttia loricariiformis* Steindachner, Regan, 298.
Habitat: Southeastern Brazil.

2. *Harttia platystoma* (Günther), Regan, 298.
Habitat: Surinam.

3. *Harttia kronei* Ribeiro, ..Ribeiro, 1907.
Habitat: Ribeira.

A4. *Harttia brevirostris* (Eigenmann & Eigenmann), ...Regan, 299.
Habitat: Içá.

STURISOMA Swainson.

Type: *Loricaria rostrata* Spix.

Range: Rio Paraguay to Magdalena and Pacific slope of Panama and Ecuador.

Oxyloricaria Bleeker (*barbata*).

A1. *Sturisoma güntheri* Regan, Regan, 299.
Loricaria rostrata Günther, *non* Spix.
Habitat: Manacapuru; Xeberos.

2. *Sturisoma robustum* Regan, Regan, 300.
Loricaria rostrata Boulenger, *non* Spix.
Habitat: Paraguay.

A3. *Sturisoma lyra* Regan, ..Regan, 300.
Loricaria rostrata Boulenger, *non* Spix.
Habitat: Rio Jurua.

4. *Sturisoma barbatum* Kner, Regan, 301.
Habitat: Rio Cuyaba.

5. **Sturisoma panamense** Eigenmann & Eigenmann, ...Regan, 201.
Loricaria rostrata Steindachner, *non* Spix; *Loricaria aurea* Steindachner.
Habitat: Rio Magdalena; Pacific slope of Panama.

6. **Sturisoma frenatum** (Boulenger), Regan, 302.
Habitat: Northwest Ecuador (St. Javier, 60 feet; Solidero, 350 feet; Rio Durango, 350 feet).

FARLOWELLA Eigenmann & Eigenmann.

Type: *Acestra acus* Kner.

Range: Amazon and northward.

Acestra Kner, preoccupied.

A1. *Farlowella gladius* (Boulenger), Regan, 303.
Habitat: Rio Jurua.

2. *Farlowella gracilis* Regan, Regan, 303.
Habitat: Magdalena Basin.

A3. *Farlowella oxyrhynchus* (Kner), Regan, 304.
Habitat: Rio Mamore; Upper Amazon; Paraguay.

A4. *Farlowella kneri* (Steindachner), Regan, 304.
Habitat: Amazons of Peru and Ecuador.

5. *Farlowella aca* (Kner), ...Regan, 304.
Habitat: Venezuela.

A6. *Farlowella amazonum* (Günther), Regan, 305.
Farlowella carinata Eigenmann & Eigenmann.
Habitat: Amazons.

A7. *Farlowella gladiolus* (Günther), Regan, 305.
Habitat: Rio Cupai.

NEOPLECOSTOMUS Eigenmann & Eigenmann.

Type: *Plecostomus microps* Steindachner.

Range that of the single species.

A1. *Neoplecostomus granosus* (Cuvier & Valenciennes), ...Regan, 306.
Plecostomus microps Steindachner.
Habitat: Goyaz; Cayenne; Rio de Janeiro; Rio Parahyba.

Family CYCLOPIDÆ.

CYCLOPIUM Swainson.[1]

Arges and *Brontes* Cuvier & Valenciennes; *Stygogenes* Günther.

Type: *Cyclopium humboldtii* Swainson.

Range: Mountain streams of northern South America on both slopes.

A1. **Cyclopium whymperi** (Boulenger), Regan, 311.
Habitat: Andes of Ecuador.

A2. **Cyclopium eigenmanni** (Regan), Regan, 312.
Cyclopium cyclopium Putnam, *non* Humboldt.

[1] I have retained the species of this family as recognized by Regan. Evermann & Kendall (Proc. Biol. Soc., Wash., xviii, p. 91, 1905) think that many are probably synonyms.

I am not certain of the position of most of the localities of this genus, whether on the Amazonian or Pacific slope. I have taken it for granted that they are from the Atlantic slope unless specifically stated that they are from the Pacific side.

Habitat: Ecuador, on both slopes.

A3. *Cyclopium vaillanti* (Regan), Regan, 312.

Habitat: Huamani Peak, Ecuador, 10,700 feet.

4. *Cyclopium orientale* (Boulenger), Regan, 313.

Habitat: Albireggas and Milla Rivers, above Merida, Venezuela.

A5. *Cyclopium brachycephalus* (Günther), Regan, 313.

Habitat: Andes of Peru; Cuenca, Ecuador.

A6. **Cyclopium chotæ** (Regan), Regan, 313.

Habitat: Chota Valley, northern Ecuador.

7. *Cyclopium marmoratum* (Regan), Regan, 314.

Habitat: St. Augustine, Andes of Colombia.

A8. *Cyclopium longifile* (Steindachner), Regan, 314.

Habitat: Rio Huambo and Rio Totora, Peru.

A9. *Cyclopium sabalo* (Cuvier & Valenciennes), ...Regan, 315.

Habitat: Peruvian Andes.

A10. *Cyclopium taczanowski* (Boulenger), Regan, 315.

Habitat: Peruvian Andes.

A11. *Cyclopium prenadilla* (Cuvier & Valenciennes), ...Regan, 316.

Habitat: Andes of Ecuador and Peru.

A12. *Cyclopium fissidens* (Regan), Regan, 316.

Habitat: Andes of Ecuador.

A13. *Cyclopium festæ* (Boulenger), Regan, 316.

Habitat: Eastern Ecuador.

14. *Cyclopium theresiæ* (Steindachner), St., 1907*b*.

Habitat: Andes of Cayandelet.

A15. *Cyclopium peruanum* (Steindachner), Regan, 317.

Habitat: Amable Maria, Peru.

A16. **Cyclopium simonsii** (Regan), Regan, 317.

Habitat: Huaras, Peru, 10,700 feet.

17. *Cyclopium homodon* (Regan), Regan, 309.

Habitat: Villeta, Colombia, 3,500 feet.

A18. *Cyclopium boulengeri* (Regan), Regan, 310.

Stygogenes humboldtii Boulenger, *non* Swainson.

Habitat: Canelos, Ecuador.

A19. *Cyclopium güntheri* (Boulenger), Regan, 310.

? Arges homodon Regan.

Habitat: Colombia.

20. **Cyclopium cyclopium** (Humboldt), Regan, 211.

Cyclopium humboldtii Swainson; (*C. prenadilla* Cuv. & Val.; *C. brachycephalus* Günther; *C. whymperi* Boulenger; *C. eigenmanni* Regan *fide* Evermann & Kendall).

Habitat: Andes near Quito.

21. *Cyclopium heterodon* (Regan), Regan, 1907, 799.

Habitat: Western Colombia.

22. *Cyclopium retrospina* (Regan), Regan, 1907, 800.

Habitat: Western Colombia.

ASTROBLEPUS Humboldt.

Type: *Astroblepus grixalvii* Humboldt.

Range that of the single species.

1. *Astroblepus grixalvii* Humboldt, Regan, 318.

? Arges güntheri Boulenger; *? Arges brachycephalus* Günther.

Habitat: Popoyan; Rio Cauca.

Order PLECTOSPONDYLI.

Family CATOSTOMIDÆ.

Holarctic fishes entering the northern border of the tropics.

CARPIODES Rafinesque.

Type: *Catostomus cyprinus* Le Sueur.
Range: Guatemala through the Mississippi valley and Great Lakes.

1. *Carpiodes meridionalis* (Günther), Meek, 26.
   Habitat: Vera Cruz to the Usumacinta in Guatemala.
2. *Carpiodes tumidus* Baird & Girard, Meek, 27.
   Habitat: Rio Panuco to the Rio Grande.
3. *Carpiodes labiosus* Meek, ...Meek, 29.
   Habitat: Rio Panuco Basin.

PANTOSTEUS Cope.

Type: *Minomus platyrhynchus* Cope.
Range: From tropical America northward through the Rocky Mountains.

1. **Pantosteus plebeius** (Baird & Girard), Meek, 30.
   Catostomus guzmaniensis Girard; *Catostomus nebuliferus* Garman.
   Habitat: From the northern margin of tropical America at Durango northward.

MOXOSTOMA Rafinesque.

Type: *Catostomus anisurus* Rafinesque.
Range: Rio Lerma through the eastern United States.

1. **Moxostoma austrinum** Bean, Meek, 35.
   Habitat: Rio Lerma Basin and headwaters of the Rio Mezquital.

Family CYPRINIDÆ.

XYSTROSUS Jordan & Snyder.

Type: *Xystrosus propoche* Jordan & Snyder.
Range that of the single species.

1. **Xystrosus popoche** Jordan & Snyder, Meek, 43.
   Habitat: Rio Lerma Basin.

ALGANSEA Girard.

Type: *Leuciscus tincella* Cuvier & Valenciennes.
Range: Lerma Basin.

1. **Algansea tincella** (Cuvier & Valenciennes), ...Meek, 44.
   Ceratichthys sallœi Günther.
   Habitat: Rio Lerma; valley of Mexico; Rio Panuco Basin.
2. **Algansea dugesi** Bean, ...Meek, 45.
   Habitat: Lerma Basin.
3. **Algansea rubescens** Meek, ..Meek, 46.
   Habitat: Lerma Basin.
4. **Algansea lacustris** Steindachner, Meek, 47.
   Algansea tarascorum Steindachner.
   Habitat: Lerma Basin.
5. **Algansea affinis** Regan, Regan, 1907–8, 151.
   Habitat: Rio Lerma.
6. *Algansea stigmatura* Regan, Regan, 1907–8, 152.
   Habitat: Mexico.

HYBOGNATHUS Agassiz.

Type: *Hybognathus nuchalis* Agassiz.
Dionda Girard; *Agoma* Girard.
Range: Border of tropical America northeastward through the Mississippi valley to the Delaware.

1. **Hybognathus episcopus** (Girard), Meek, 48.
   Dionda melanops, couchi, amara, fluviatilis Girard; *Hybognathus serenus, melanops* Jordan; *Hybognathus punctifer* Garman; *Hybognathus civilis* Cope; *Hybognathus episcopa* Jordan & Evermann.
   Habitat: Rio Mezquital to Texas.
2. *Hybognathus rasconis* (Jordan & Snyder), ...Meek, 50.
   Habitat: Panuco Basin.

LEUCISCUS Cuvier.

Type: *Cyprinus leuciscus* Linnæus.
Range: Europe, Asia and North America.

1. **Leuciscus nigrescens** (Girard), Meek, 55.
   Tigoma pulchella, pulchra Girard; *Gila conspersa, nigrescens, modesta* Garman; *Leuciscus purpureus* Rutter; *Leuciscus niger* Bean.
   Habitat: Headwaters of Rio Mezquital and northward.

FALCULA Jordan & Snyder.

Type: *Falcula chapalæ* Jordan & Snyder.
Range that of the single species.

1. **Falcula chapalæ** Jordan & Snyder, Meek, 58.
   Habitat: Lerma Basin.

AZTECULA Jordan & Evermann.

Type: *Notropis aztecus* Woolman.
Range: Central Mexico.
Azteca Jordan & Evermann.

1. **Aztecula vittata** (Girard), ..Meek, 59.
   Notropis aztecus Woolman.
   Habitat: Valley of Mexico and the Rio Balsas Basin.
2. **Aztecula lermæ** (Evermann & Goldsborough), ...Meek, 60.
   Habitat: Rio Lerma Basin.
3. **Aztecula mexicana** Meek, ..Meek, 61.
   Habitat: Mexican Plateau.

NOTROPIS Rafinesque.

Type: *Notropis atherinoides* Rafinesque.
Codoma, Alburnops, Moniana Girard; *Graodus* Günther; *Orcella* Jordan & Evermann; *Nototropis* Meek.
Range: Rio Balsas north through the eastern slope of America.

1. **Notropis calientis** Jordan & Snyder, Meek, 65.
   Habitat: Lerma Basin.
2. **Notropis boucardi** (Günther), Meek, 67.
   Graodus nigrotæniatus Günther.
   Habitat: Rio Balsas.
3. **Notropis ornatus** (Girard).
   Habitat: Rio Mezquital and northward.
4. *Notropis forlonensis* Meek, ..Meek, 70.
   Habitat: Rio Panuco Basin.

EVARRA Woolman.

Type: *Evarra eigenmanni* Woolman.
Range: Valley of Mexico.

1. **Evarra eigenmanni** Woolman, Meek, 77.
   Habitat: Valley of Mexico.
2. **Evarra tlahuacensis** Meek, ..Meek, 78.
   Habitat: Valley of Mexico.

HYBOPSIS Agassiz.

Type: *Hybopsis gracilis* Agassiz.
Yuriria Jordan & Evermann.
Range: Rio Lerma northeast through the Mississippi Valley and California?

1. **Hybopsis altus** (Jordan), ..Meek, 81.
   Habitat: Rio Lerma Basin.

Family CHARACIDÆ.

Subfamily ANODINÆ.

ANODUS Spix.

Elopomorphus Gill.
Type: *Anodus elongatus* Spix.
Range: Amazons and Orinoco.

1. *Anodus elongatus* Spix.
   Elopomorphus jordani Gill; *Anodus steatops* Cope.
   Habitat: Amazons.

EIGENMANNINA Fowler.

Type: *Anodus melanopogon* Cope.
Range: Amazon and Orinoco.

1. *Eigenmannina orinocensis* (Steindachner).
   Habitat: Orinoco River.

A2. *Eigenmannina melanopogon* (Cope).
   Habitat: Peruvian Amazon.

Subfamily CURIMATINÆ.

POTAMORHINA Cope.

Type: *Curimatus pristigaster* Steindachner.
Range: Solimoens and Marañon.

A1. *Potamorhina pristigaster* (Steindachner).
   Habitat: Amazons from Rio Negro to Peru.

PSECTROGASTER Eigenmann & Eigenmann

Type: *Psectrogaster rhomboides* Eigenmann & Eigenmann.
Range: Rio Paraguay northward.

1. *Psectrogaster rhomboides* Eigenmann & Eigenmann.
   Curimatus cyprinoides Steindachner, *non* Linnæus.
   Habitat: Rio Puty.
2. *Psectrogaster curviventris* Eigenmann & Kennedy.
   Habitat: Rio Paraguay.
3. *Psectrogaster auratus* Gill.
   Habitat: Bolivia.

A4. *Psectrogaster amazonicus* Eigenmann & Eigenmann.
   Anodus ciliatus Müller & Troschel.
   Habitat: Amazons.

A5. *Psectrogaster ciliatus* (Müller & Troschel).
   Habitat: Amazon and its tributaries; Guiana; Rios Parana and Paraguay.

CURIMATOPSIS Steindachner.

Type: *Curimatopsis macrolepis* Steindachner.
Range: Amazons.

A1. *Curimatopsis macrolepis* Steindachner.
   Habitat: Amazons and tributaries from Rio Negro to Tabatinga.

A2. *Curimatopsis microlepis* Eigenmann & Eigenmann.
   Habitat: Jatuarana.

CURIMATELLA Eigenmann & Eigenmann.

Type: *Curimatella lepidurus* Eigenmann & Eigenmann.
Range: Paraguay and San Francisco and northward to Guiana.

1. *Curimatella lepidurus* Eigenmann & Eigenmann.
   Habitat: Rio San Francisco.

A2. *Curimatella meyeri* (Steindachner).
   Habitat: Amazons.

A3. *Curimatella serpæ* Eigenmann & Eigenmann.
   Habitat: Serpa.

A4. *Curimatella alburna* (Müller & Troschel).
   Habitat: Guaporé, northward to Amazons and Guiana; Paraguay.

5. *Curimatella alburna australis* Eigenmann & Kennedy.
   Habitat: Paraguay.

A6. *Curimatella alburna lineata* Eigenmann & Eigenmann.
Habitat: Jutahy.

A7. *Curimatella alburna caudimaculata* Pellegrin, ...Pellegrin, 1909, 150.
Habitat: Amazons.

A8. *Curimatella xinguensis* Steindachner.
Habitat: Xingu.

CURIMATUS OKEN.

Cyphocharax, Steindachnerina and *Peltapleura* Fowler.
Type: *Salmo edentulus* Bloch=*Salmo cyprinoides* Linnæus.
Range: Every stream from Panama to the Rio de La Plata on the eastern slope and on the western slopes of Panama and Ecuador.

A1. *Curimatus spilurus* Günther.
Habitat: Orinoco and Guiana, Amazons and Paraguay.

2. *Curimatus gilli* Eigenmann & Kennedy.
Habitat: Paraguay Basin.

A3. *Curimatus spiluropis* Eigenmann & Eigenmann.
Habitat: Içá and Solimoens and Parana Basins.

A4. *Curimatus dorsalis* Eigenmann & Eigenmann.
Habitat: Amazon and Solimoens.

A5. *Curimatus albulus* Lütken.
Habitat: Rio das Velhas.

6. *Curimatus nasus* Steindachner.
Habitat: Ecuador and Paraguay Basin.

7. *Curimatus conspersus* Holmberg.
Habitat: Paraguay.

8. **Curimatus troschelii** Günther.
Habitat: Western slopes of Ecuador.

9. *Curimatus nigrotænia* Boulenger.
Habitat: Matto Grosso.

10. *Curimatus elegans* Steindachner.
Habitat: Coastwise streams of southeastern Brazil; Paraguay.

11. *Curimatus elegans nitens* Holmberg.
Curimatus nitens Holmberg; *Curimatus elegans paraguayensis* Eigenmann & Kennedy.
Habitat: Paraguay Basin.

A12. *Curimatus elegans bahiensis* Eigenmann & Eigenmann.
Habitat: Bahia.

13. *Curimatus argenteus* Gill.
Habitat: Trinidad.

A14. *Curimatus bimaculatus* Steindachner.
Habitat: Solimoens, Amazon and Paraguay Basin.

15. *Curimatus bimaculatus sialis* Eigenmann & Eigenmann.
Habitat: Lake Manacapuru.

A16. *Curimatus bimaculatus trachystethus* Cope.
Habitat: Amazons at Serpa and Peru.

A17. *Curimatus dobula* Günther.
Habitat: Eastern slope of Peru and Ecuador.

A18. *Curimatus güntheri* Eigenmann & Eigenmann.
Habitat: Tabatinga.

19. *Curimatus microcephalus* Eigenmann & Eigenmann.
Habitat: Surinam.

20. **Curimatus magdalenæ** Steindachner.
Habitat: Rivers Mamoni and Magdalena.

A21. *Curimatus notatus* Steindachner.
Habitat: Para.

22. *Curimatus gilberti* Quoy & Gaimard.
Curimatus voga Hensel; *Curimatus albula* Lütken.
Habitat: Southeastern Brazil; Paraguay Basin.

23. *Curimatus gilberti brevipinnis* Eigenmann & Eigenmann.
Habitat: La Plata Basin.

A24. *Curimatus plumbeus* Eigenmann & Eigenmann.
Habitat: Lake Hyanuary to Obidos.

25. *Curimatus nägelii* Steindachner.
Habitat: Rio Janeiro.

A26. *Curimatus leucostictus* Eigenmann & Eigenmann.
Habitat: Rio Negro and Lago Alexo.
A27. *Curimatus brevipes* Eigenmann & Ogle.
Habitat: Peru?
28. *Curimatus platanus* Günther.
Habitat: Rio de La Plata.
A29. *Curimatus asper* Günther.
Habitat: Eastern slope of Peru.
A30. *Curimatus rutiloides* Kner.
Habitat: Rios Solimoens, Marañon and Paraguay, with their tributaries.
A31. *Curimatus hypostomus* Boulenger.
Habitat: Eastern slopes of Peru.
32. *Curimatus mivartii* Steindachner.
Habitat: Magdalena Basin.
A33. *Curimatus leuciscus* Günther.
Habitat: Amazons.
34. *Curimatus leuciscus boliviæ* Eigenmann & Ogle.
Habitat: Bolivia.
A35. *Curimatus vittatus* Kner.
Habitat: Solimoens and tributaries.
A36. *Curimatus occllatus* Eigenmann & Eigenmann.
Habitat: Xingu.
A37. *Curimatus isognathus* Eigenmann & Eigenmann.
Habitat: Solimoens.
A38. *Curimatus knerii* Steindachner.
Curimatus cyprinoides Kner (not of Linnæus).
Habitat: Amazons and northward.
A39. *Curimatus cyprinoides* (Linnæus).
Salmo edentulus Bloch.
Habitat: Amazons and northward.
40. **Curimatus boulengeri** Eigenmann nom. nov.
Curimata güntheri Boulenger (not E. & E.).
Habitat: Rio Vinces, Ecuador.
41. *Curimatus macrops* Eigenmann & Eigenmann.
Habitat: Rios Puty and Conçallo.
A42. *Curimatus falcatus* Eigenmann & Eigenmann.
Habitat: Xingu.
A43. *Curimatus simulatus* Eigenmann & Eigenmann.
Habitat: Upper Solimoens.
44. *Curimatus copei* Fowler.
Habitat: Surinam.
45. *Curimatus schomburgkii* Günther.
Habitat: Guianas.
46. *Curimatus essequibensis* Günther.
Anodus cyprinoides Müller & Troschel.
Habitat: Essequibo.
A47. *Curimatus aureus* Pellegrin, Pellegrin, 1908, 342.
Habitat: Rio Guayas, Ecuador.

SEMITAPICIS Eigenmann & Eigenmann.
Type: *Charax planirostris* Gronow.
Range: Maracaibo to Argentina; not in southeastern coastwise streams.
A1. *Semitapicis planirostris* (Gronow).
Curimatus abramoides Kner.
Habitat: Rio Negro to Obidos.
A2. *Semitapicis laticeps* (Cuvier & Valenciennes).
Curimatus altamazonicus Cope.
Habitat: Lake Maracaibo to the Rio Paraguay.

GASTEROTOMUS Eigenmann.
Type: *Anodus latior* Spix.
Range that of the single species.
A1. *Gasterotomus latior* (Spix).
Habitat: Amazons south to Argentina; not in southeast coastwise streams.

Subfamily PARODONTINÆ.

PARODON Cuvier & Valenciennes.
Type: *Parodon suborbitalis* Cuvier & Valenciennes.
Range: Colombia to the Rios San Francisco and La Plata; not in coastwise streams of southeastern Brazil.

A1. *Parodon suborbitalis* Cuvier & Valenciennes.
Parodon nasus Kner; *Parodon hilarii* Reinhardt.
Habitat: Lake Maracaibo to Cujaba and Rio das Velhas.
A2. *Parodon buckleyi* Boulenger.
Habitat: Eastern Ecuador.
3. *Parodon gestri* Boulenger.
Habitat: Rio Coxipo.
4. *Parodon affinis* Steindachner.
Habitat: La Plata Basin.
5. *Parodon caliensis* Boulenger.
Habitat: Colombia.
6. *Parodon tortuosus* Eigenmann & Norris.
Habitat: Parana and Paraguay Basins.
7. *Parodon paraguayensis* Eigenmann.
Habitat: Rio Paraguay.
8. *Parodon piracicabæ* Eigenmann.
Habitat: Piracicaba.

SACCODON Kner.

Type: *Saccodon wagneri* Kner & Steindachner.
Range: Pacific slope of Ecuador.
1. **Saccodon wagneri** Kner & Steindachner.
Habitat: Western Ecuador.
2. **Saccodon craniocephalum** Thominot.
Habitat: Western Ecuador.

Subfamily HEMIODINÆ.

HEMIODUS Müller.

Type: *Salmo unimaculatus* Bloch.
Range: Orinoco to the Rio San Francisco, the Peruvian Amazon and the upper courses of the Paraguay; not in coastwise streams of southeastern Brazil.
A1. *Hemiodus unimaculatus* (Bloch).
Hemiodus crenidens Müller.
Habitat: Guianas to the Paraguay River.
A2. *Hemiodus semitæniatus* Kner.
Habitat: Matto Grosso, French Guiana.
A3. *Hemiodus fowleri* Steindachner.
Habitat: Amazon.
A4. *Hemiodus gracilis* Günther.
Habitat: Rios Cupai and San Francisco.
A4. *Hemiodus immaculatus* Kner.
Habitat: Orinoco to the Amazon.
6. *Hemiodus longiceps* Kner.
Habitat: Rios Icanno and Capin.
A7. *Hemiodus microlepis* Kner.
Habitat: Solimoens and Marañon and their affluents; Paraguay.
A8. *Hemiodus goeldii* Steindachner, St., 1908*a*.
Habitat: Xingu.
9. *Hemiodus quadrimaculatus* Pellegrin, Pellegrin, 1908, 343.
Habitat: French Guiana.
10. *Hemiodus argenteus* Pellegrin, Pellegrin, 1908, 344.
Habitat: Orinoco.

ANISITSIA Eigenmann.

Type: *Anodus notatus* Schomburgk.
Range: Guianas to Asuncion on the Paraguay. Not in the coastwise streams of southeastern Brazil.
1. *Anisitsia kappleri* (Günther).
Habitat: Surinam.
A2. *Anisitsia notata* (Schomburgk).
Hemiodus microcephalus Günther.
Habitat: Guianas to the Araguay and Guaporé.
A3. *Anisitsia amazonum* (Humboldt).
Curimatus amazonum Humboldt; *Prochilodus humboldtii* Cuvier & Valenciennes.
Habitat: Amazons.
4. *Anisitsia othonops* Eigenmann & Kennedy.
Habitat: Paraguay Basin.

Subfamily PROCHILODINÆ.

PROCHILODUS Agassiz.

Pacu Spix; *Chilomyzon* Fowler.

Type: *Prochilodus argenteus* Agassiz.

Range: Western Ecuador; La Plata to the Magdalena and Peru in all streams.

1. **Prochilodus humeralis** Günther.
   Habitat: Western Ecuador.
2. *Prochilodus steindachneri* Fowler.
   Habitat Parahyba.
3. *Prochilodus vimboides* Heckel.
   Habitat: Southeastern Brazil.
4. *Prochilodus oligolepis* Günther.
   Habitat: Ypanema.
5. *Prochilodus longirostris* Steindachner.
   Habitat: Magdalena Basin.
6. *Prochilodus brevis* Steindachner.
   Habitat: Southeastern Brazil.

A7. *Prochilodus rubrotæniatus* Schomburgk.
   Prochilodus nigricans Günther.
   Habitat: Magdalena to Essequibo and Rio Negro.

8. *Prochilodus lacustris* Steindachner.
   Habitat: Parnahyba.

A9. *Prochilodus cephalotes* Cope.
   Habitat: Eastern Peru.

10. *Prochilodus magdalenæ* Steindachner.
    Prochilodus asper Steindachner.
    Habitat: Magdalena Basin.
11. *Prochilodus asper* Lütken.
    Habitat: Venezuela.
12. *Prochilodus hartii* Steindachner.
    Habitat: Southeastern Brazil.
13. *Prochilodus reticulatus* Valenciennes.
    Habitat: Alta Parana to Alto Beni; Maracaibo.

A14. *Prochilodus ortonianus* Cope.
   Habitat: Peruvian Amazon.

A15. *Prochilodus insignis* Schomburgk.
   Habitat: Guiana and Amazons.

A16. *Prochilodus dobulinus* Cuvier & Valenciennes.
   Habitat: Amazon.

17. *Prochilodus affinis* Reinhardt.
    Habitat: San Francisco Basin.
18. *Prochilodus argenteus* Agassiz.
    Prochilodus costatus Cuvier & Valenciennes.
    Habitat: Paraguay Basin to the Rio San Francisco.
19. *Prochilodus platensis* Holmberg.
    Habitat: La Plata Basin.
20. *Prochilodus scrofa* Steindachner.
    Habitat: Paraguay to Rio de Janeiro.
21. *Prochilodus lineatus* (Valenciennes).
    Habitat: La Plata Basin.

A22. *Prochilodus nigricans* Agassiz.
   Habitat: La Plata and Amazon systems.

A23. *Prochilodus binotatus* Schomburgk.
   Habitat: Rio Negro Basin.

24. *Prochilodus laticeps* Steindachner.
    Habitat: Orinoco Basin.

A25. *Prochilodus brama* Cuvier & Valenciennes.
   Habitat: Orinoco and Amazons.

A26. *Prochilodus tæniurus* Valenciennes.
   Habitat: Amazons.

A27. *Prochilodus caudofasciatus* Starks, Starks, 1907, 773.
   Habitat: Rio Perené, Peru.

Subfamily CHILODINÆ.

CÆNOTROPUS Günther.

Microdus Kner.

Type: *Microdus labyrinthicus* Kner.

Range: Orinoco and Rio Capin.

A1. *Cænotropus labyrinthicus* (Kner).
   Habitat: Rio Orinoco to Rio Capin.

CHILODUS Müller & Troschel.

Type: *Chilodus punctatus* Müller & Troschel.

Range: Guianas.

1. *Chilodus punctatus* Müller & Troschel.
Citharinus chilodus Cuvier & Valenciennes.
Habitat: Guianas.

Subfamily GYMNOCHARACININÆ.

GYMNOCHARACINUS Steindachner.

Type: *Gymnocharacinus bergii* Steindachner.
Range that of the single species.
1. *Gymnocharacinus bergii* Steindachner.
Habitat: South of Buenos Aires.

Subfamily ANOSTOMATINÆ.

LÆMOLYTA Cope.

Schizodontopsis Garman.
Type: *Schizodon tæniatus* Kner.
Range: Orinoco, Amazons.
A1. *Læmolyta tæniata* (Kner).
Habitat: Amazons.

ANOSTOMUS Gronow.

Pithecocharax Fowler.
Type: *Salmo anostomus* Linnæus.
Range: Amazon valley and northward.
A1. *Anostomus anostomus* (Linnæus).
Anostomus salmoneus Gronow.
Habitat: Essequibo and Jutahy.
A2. *Anostomus gracilis* (Kner).
Habitat: Rio Guaporé.
A3. *Anostomus trimaculatus* Kner.
Habitat: Amazons and affluents.
A4. *Anostomus ucayalensis* (Fowler).
Habitat: Peruvian Amazon.
A5. *Anostomus proximus* Garman.
Habitat: Villa Bella; Ueranduba.
A6. *Anostomus varians* Garman.
Habitat: Amazons.
A7. *Anostomus varians nitens* Garman.
Habitat: Içá.
8. *Anostomus orinocensis* Steindachner.
Habitat: Orinoco.

SCHIZODON Agassiz.

Type: *Schizodon fasciatus* (Spix).
Range: La Plata to Venezuela.
A1. *Schizodon vittatus* (Cuvier & Valenciennes).
Habitat: La Plata to Amazon.
A2. *Schizodon fasciatus* (Spix).
Habitat: Venezuela and Amazon; Paraguay.
3. *Schizodon borelli* Boulenger.
Habitat: Upper Paraguay?
4. *Schizodon dissimilis* (Garman).
Anostomus fasciatus Eigenmann & Kennedy.
Habitat: Rio Puty; Paraguay Basin.
A5. *Schizodon isognathus* Kner.
Habitat: Cujaba, Apuré.
6. *Schizodon knerii* (Steindachner).
Habitat: Rio Grande do Sul to Rio San Francisco.
7. *Schizodon platæ* Garman.
Habitat: La Plata.
A8. *Schizodon elongatus* Steindachner, St., 1908*a*.

LAHILLIELLA Eigenmann & Kennedy.

Type: *Schizodon nasutus* Kner.
1. *Lahilliella nasuta* (Kner).
Habitat: Rio Puty and La Plata basin.

RHYTIODUS Kner.

Garmanina Fowler.
Type: *Rhytiodus microlepis* Kner.
Range: Rio Negro to Peru.
A1. *Rhytiodus microlepis* Kner.
Habitat: Barra do Rio Negro.
A2. *Rhytiodus argenteofuscus* Kner.
Schizodon sagittarius Cope.
Habitat: Rio Negro to Peruvian Amazon.

ANOSTOMOIDES Pellegrin.

Type: *Anostomoides atrianalis* Pellegrin.

Range that of the single species.

1. *Anostomoides atrianalis* Pellegrin.
   Habitat: Orinoco.

LEPORINUS Agassiz.

Abramites Fowler.

Type: *Leporinus novemfasciatus* Agassiz = *Salmo fasciatus* Bloch.

Range: All east slope streams from the Magdalena to the La Plata.

A1. *Leporinus nattereri* Steindachner.
   Habitat: Amazon.

A2. *Leporinus striatus* Kner.
   Habitat: Rio Magdalena, Peruvian Amazon and Paraguay.

3. *Leporinus macrolepidotus* Peters.
   Habitat: Rio Janeiro.

A4. *Leporinus melanopleura* Günther.
   Habitat: Bahia and Cipo.

5. *Leporinus tœniatus* Lütken.
   Habitat: Rio das Velhas.

A6. *Leporinus nigrotœniatus* (Schomburgk).
   Habitat: Guiana and middle course of the Amazons.

A7. *Leporinus semivittatus* Boulenger.
   Habitat: Rio Negro.

A8. *Leporinus mülleri* Steindachner.
   Habitat: Orinoco, Solimoens and Marañon.

A9. *Leporinus agassizii* Steindachner.
   Habitat: Solimoens.

A10. *Leporinus megalepis* Günther.
   Leporinus maregravii Lütken.
   Habitat: Guianas; Peruvian Amazon and Rio de Janeiro.

A11. *Leporinus bimaculatus* Castelnau.
   Leporinus frederici Eigenmann & Norris, *non* Bloch.
   Habitat: Goyaz to Taubaté.

12. *Leporinus steindachneri* Eigenmann.
   Leporinus affinis Steindachner, *non* Günther.
   Habitat: Southeastern Brazil.

13. *Leporinus muyscarum* Steindachner.
   Habitat: Colombia.

A14. *Leporinus friderici* Bloch.
   Curimatus acutidens Valenciennes; *Leporinus leschenaultii* Cuvier & Valenciennes; *Leporinus megalepis* Günther, in part.
   Habitat: Venezuela; Guianas to La Plata.

15. *Leporinus reinhardti* Lütken.
   Leporinus affinis Lütken, not of Günther.
   Habitat: Rio das Velhas.

A16. *Leporinus obtusidens* Valenciennes.
   Leporinus pachyurus Cuvier & Valenciennes; *? Leporinus elongatus* Cuvier & Valenciennes.
   Habitat: La Plata Basin; Rio Grande do Sul; Rio Cipo; Magdalena Basin.

17. *Leporinus silvestrii* Boulenger.
   Habitat: Matto Grosso.

18. *Leporinus bahiensis* Steindachner.
   Habitat: Bahia.

19. *Leporinus copelandi* Steindachner.
   Habitat: Southeastern Brazil; Tieté.

A20. *Leporinus trifasciatus* Steindachner.
   Habitat: Huallaga and Paraguay Basin.

21. *Leporinus eques* Steindachner.
   Habitat: Rio Magdalena and Rio Paraguay.

A22. *Leporinus affinis* Günther.
   Habitat: Orinoco; Rio Capin and La Plata Basin.

23. *Leporinus mormyrops* Steindachner.
   Habitat: Parahyba.

24. *Leporinus solarii* Holmberg.
   Habitat: Rio de La Plata.

A25. *Leporinus hypselonotus* Günther.
   Habitat: Orinoco; Solimoens; Maranon; Paraguay.

26. *Leporinus conirostris* Steindachner.
   Habitat: Southeastern Brazil; Paraguay; São Paulo.

A27. *Leporinus holostistus* Cope.
Habitat: Peruvian Amazon.
A28. *Leporinus fasciatus* (Bloch).
Leporinus novemfasciatus Agassiz.
Habitat: Venezuela and Guianas to the Paraguay.
A29. *Leporinus multifasciatus* Cope.
Habitat: Peruvian Amazon.
30. *Leporinus margaritaceus* Günther.
Habitat: British Guiana.
A31. *Leporinus maculatus* Müller & Troschel.
Habitat: Guianas to Goyaz.

Subfamily LEPORELLINÆ.

LEPORELLUS Lütken.

Type: *Leporinus pictus* Kner = *Leporinus vittatus* Cuvier & Valenciennes.
Range that of the single species.

A1. *Leporellus vittatus* (Cuvier & Valenciennes).
Leporinus pictus Kner; *Leporinus maculifrons* Reinhardt.
Habitat: Magdalena to Rio das Velhas.

Subfamily NANNOSTOMATINÆ.

NANNOSTOMUS Günther.

Type: *Nannostomus beckfordii* Günther.
Range: Guiana; Amazons; Paraguay.
1. *Nannostomus beckfordii* Günther.
Habitat: Demarara.
A2. *Nannostomus anomalus* Steindachner.
Habitat: Rio Negro and Amazon.
3. *Nannostomus marginatus* Eigenmann.
Habitat: British Guiana.
4. *Nannostomus minimus* Eigenmann.
Habitat: Potaro River.
5. *Nannostomus simplex* Eigenmann.
Habitat: Lama Stop off, British Guiana.

PŒCILOBRYCON Eigenmann.

Type: *Pœcilobrycon harrisoni* Eigenmann.
1. *Pœcilobrycon harrisoni* Eigenmann.
Habitat: Christianburg, British Guiana.
2. *Pœcilobrycon auratus* Eigenmann.
Habitat: Essequibo River.
3. *Pœcilobrycon erythrurus* Eigenmann.
Habitat: Essequibo Basin.
4. *Pœcilobrycon ocellatus* Eigenmann.
Habitat: British Guiana.
A5. *Pœcilobrycon trifasciatus* Steindachner.
Habitat: Amazons and affluents.
A6. *Pœcilobrycon eques* Steindachner.
Habitat: Peruvian Amazon.
A7. *Pœcilobrycon unifasciatus* Steindachner.
Habitat: Amazons.

CHARACIDIUM Reinhardt.

Chorimycterus Cope; *Nannognathus* Boulenger; *Pœcilasomatops* Fowler.
Type: *Characidium fasciatum* Reinhardt.
Range: Orinoco south to the Rio San Francisco and the La Plata Basin.
A1. *Characidium etheostoma* Cope.
Habitat: Ambyiacu.
2. *Characidium borellii* (Boulenger).
Habitat: San Pablo, Argentina.
A3. *Characidium fasciatum* Reinhardt.
Habitat: Orinoco south to the Rio das Velhas and the La Plata Basin.
A4. *Characidium purpuratum* Steindachner.
Habitat: Ecuador.
A5. *Characidium steindachneri* Cope.
Habitat: Peruvian Amazon.
6. *Characidium tenue* (Cope).
Habitat: Rio Grande do Sul.
7. *Characidium laterale* Eigenmann.
Habitat: Potaro River.

8. *Characidium vintoni* Eigenmann.
Habitat: Shrimp Creek near Kaieteur.
9. *Characidium blennioides* Eigenmann.
Habitat: British Guiana.
A10. *Characidium zebra* Eigenmann.
Habitat: Rio Branco Basin.
11. *Characidium pellucidum* Eigenmann.
Habitat: Gluck Island, Essequibo River.
12. *Characidium pteroides* Eigenmann.
Habitat: Essequibo River.
13. *Characidium catenatum* Eigenmann.
Habitat: Essequibo River.
A14. *Characidium brevirostris* Pellegrin.
Habitat: Northern Brazil.

ARCHICHEIR Eigenmann.

Type: *Archicheir minutus* Eigenmann.
Range that of the single species.
1. *Archicheir minutus* Eigenmann.
Habitat: Christianburg, British Guiana.

MICROCHARAX Eigenmann.

Type: *Nannostomus lateralis* Boulenger.
Range that of the single species.
1. *Microcharax lateralis* (Boulenger).
Habitat: Paraguay Basin.

JOBERTINA Pellegrin.

Type: *Jobertina interrupta* Pellegrin.
Range that of the single species.
1. *Jobertina interrupta* Pellegrin.
Habitat: Serra d'Estrello, Brazil.

Subfamily PYRRHULININÆ.

COPEINA Fowler.

Type: *Pyrrhulina argyrops* Cope.
Range: Amazons.
A1. *Copeina nattereri* (Steindachner).
Habitat: Amazons.
A2. *Copeina guttata* (Steindachner).
Habitat: Amazons.
A3. *Copeina argyrops* (Cope).
Habitat: Amazons.

POGONOCHARAX Regan.

Type: *Pogonocharax rehi* Regan.
1. *Pogonocharax rehi* Regan,
Habitat: Argentina.

PYRRHULINA Cuvier & Valenciennes.

Type: *Pyrrhulina filamentosa* Cuvier & Valenciennes.
Range: Paraguay and Amazons; Surinam.
A1. *Pyrrhulina læta* Cope.
Habitat: Ambyiacu.
2. *Pyrrhulina australis* Eigenmann & Kennedy.
Pyrrhulina semifasciata Boulenger (*non* Steindachner).
Habitat: Paraguay and tributaries.
A3. *Pyrrhulina melanostoma* (Cope).
Habitat: Ecuador.
4. *Pyrrhulina filamentosa* Cuvier & Valenciennes.
Habitat: Surinam.
A5. *Pyrrhulina semifasciata* Steindachner.
Habitat: Amazons.
A6. *Pyrrhulina brevis* Steindachner.
Habitat: Paraguay and Amazons.
A7. *Pyrrhulina maxima* Eigenmann & Eigenmann.
Habitat: Solimoens.

Subfamily APHIOCHARACINÆ.

CŒLURICHTHYS Ribeiro.

Type: *Cœlurichthys iporangœ* Ribeiro.
Range that of the single species.
1. *Cœlurichthys iporangœ* Ribeiro.
Habitat: Ribeira.

HOLOSHESTHES Eigenmann.

Type: *Cheirodon pequira* Natterer.

Range that of the single species.

A1. *Holoshesthes pequira* (Natterer).
Habitat: Upper Paraguay and Rio Guaporé.

ODONTOSTILBE Cope.

Type: *Odontostilbe fugitiva* Cope.

Range: Trinidad; Ecuador and Paraguay.

1. *Odontostilbe pulcher* (Gill).
Habitat: Trinidad.

A2. *Odontostilbe fugitiva* Cope.
Habitat: Ecuador.

3. *Odontostilbe microcephala* Eigenmann.
Habitat: Pilcomayo.

4. *Odontostilbe paraguayensis* Eigenmann & Kennedy.
Habitat: Paraguay.

5. *Odontostilbe trementinæ* Eigenmann & Kennedy.
Habitat: Paraguay.

CHEIRODON Girard.

Type: *Cheirodon pisciculus* Girard.

Range: Magdalena; Amazon south to the Rio San Francisco, and the La Plata Basin; western slope of Chili.

1. *Cheirodon interruptus* (Jenyns).
Habitat: La Plata Basin.

2. *Cheirodon monodon* Cope.
Habitat: Rio Grande do Sul.

3. *Cheirodon annæ* McAtee.
Habitat: "South America."

4. **Cheirodon pisciculus** Girard.
Habitat: Chili.

A5. *Cheirodon nattereri* Steindachner.
Cheirodon pulcher Steindachner, *non* Gill; *Cheirodon steindachneri* Eigenmann & Eigenmann.
Habitat: Amazon; Paraguay.

6. *Cheirodon calliurus* Boulenger.
Habitat: Matto Grosso.

A7. *Cheirodon insignis* Steindachner.
Habitat: Amazon; Magdalena; Paraguay.

8. *Cheirodon piaba* Lütken.
Habitat: San Francisco Basin.

9. *Cheirodon ribeiroi* Eigenmann.
Habitat: Rio Paraguay.

A10. *Cheirodon micropterus* Eigenmann.
Habitat: Lower Amazon.

APHYOCHARAX Günther.

Type: *Aphyocharax pusillus* Günther.

Range: Amazons south to the Paraguay.

1. *Aphyocharax rathbuni* Eigenmann.
Habitat: Paraguay.

2. *Aphyocharax dentatus* Eigenmann & Kennedy.
Habitat: Paraguay.

3. *Aphyocharax anisitsi* Eigenmann & Kennedy.
Habitat: Paraguay.

A4. *Aphyocharax pusillus* Günther.
Habitat: Marañon Basin.

A5. *Aphyocharax alburnus* (Günther),
Habitat: Marañon and La Plata Basin.

A6. *Aphyocharax eques* (Steindachner).
Habitat: Amazon.

7. *Aphyocharax stramineus* Eigenmann.
Habitat: Paraguay.

6. *Aphyocharax heteresthes* Ulrey.
Habitat: Brazil.

A7. *Aphyocharax filigerus* Cope.
Habitat: Marañon.

HOLOPRION Eigenmann.

Type: *Cheirodon agassizii* Steindachner.

Range: Jatuarana and "Brazil."

1. *Holoprion maxillaris* (Ulrey).
Habitat: Brazil.

2. *Holoprion agassizii* (Steindachner).
Habitat: Jatuarana.

Subfamily CRENUCHINÆ.

CRENUCHUS Günther.

Type: *Crenuchus spilurus* Günther.
Range that of the single species.

A1. *Crenuchus spilurus* Günther.
Habitat: Amazons and Guiana.

PŒCILOCHARAX Eigenmann.

Type: *Pœcilocharax bovallii* Eigenmann.
Range that of the single species.

1. *Pœcilocharax bovallii* Eigenmann.
Habitat: Kaieteur, Potaro River.

Subfamily IGUANODECTINÆ.

IGUANODECTES Cope.

Type: *Iguanodectes tenuis* Cope.
Range that of the single species.

A1. *Iguanodectes tenuis* Cope.
Habitat: Ambyiacu.

Subfamily TETRAGONOPTERINÆ.

HENOCHILUS Garman.

Type: *Henochilus wheatlandi* Garman.
Range that of the single species.

1. *Henochilus wheatlandi* Garman.
Habitat: Southeastern Brazil.

BRYCON Müller & Troschel.

Bryconodon Eigenmann. *Triurobrycon* Eigenmann.

Type: *Brycon falcatus* Müller & Troschel.
Range: La Plata to Guatemala in all streams; western Peru, Ecuador and Panama.

(CHALCINOPSIS Kner.)
(Type: *Chalcinopsis striatulus* Kner.)

A1. *Brycon striatulus* (Kner).
Chalcinopsis chagrensis Kner.
Habitat: Ecuador to Panama.

2. *Brycon guatemalensis* Regan.
Habitat: Central America.

3. *Brycon rubricauda* Steindachner.
Habitat: Cauca.

4. **Brycon alburnus** (Günther).
Habitat: Western Ecuador.

5. **Brycon dentex** Günther.
Habitat: Western Ecuador to Guatemala.

(MEGALOBRYCON Günther.)
(Type: *Megalobrycon cephalus* Günther.)

6. *Brycon microlepis* Perugia.
Habitat: Upper Paraguay Basin.

A7. *Brycon cephalus* (Günther).
Habitat: Peruvian Amazon.

A8. *Brycon erythropterus* (Cope).
Habitat: Ambyiacu.

9. *Brycon ferox* Steindachner.
Habitat: Rio Mucuri.

A10. *Brycon melanopterus* (Cope).
Habitat: Amazons.

11. *Brycon devillei* (Castelnau).
Brycon insignis Steindachner.
Habitat: Southeastern Brazil.

(BRYCON Müller & Troschel.)

A12. *Brycon hilarii* (Cuvier & Valenciennes).
Habitat: Salinas; Paraguay; Rio San Francisco; Amazon.

13. *Brycon carpophagus* (Cuvier & Valenciennes).
Habitat: Minas Geraes.

14. *Brycon lineatus* Steindachner.
Habitat: La Plata.

A15. *Brycon stübelli* Steindachner.
Habitat: Amazons.

A16. *Brycon brevicaudus* Günther.
Habitat: Amazon Basin.

17. *Brycon nattereri* Günther.
Chalceus opalinus Kner.
Habitat: Upper Parana Basin.
18. *Brycon reinhardti* Lütken.
Habitat: Southeastern Brazil.
A19. *Brycon capito* Cope.
Habitat: Ambyiacu.
20. *Brycon longiceps* Steindachner.
Habitat: Orinoco.
21. *Brycon schomburgkii* Müller & Troschel.
Habitat: Essequibo.
22. **Brycon atricaudatus** (Kner).
Brycon moorei Steindachner.
Habitat: Magdalena and Western Ecuador.
23. *Brycon bahiensis* Günther.
Habitat: Bahia.
A24. *Brycon stolzmanni* Steindachner.
Habitat: Peru.
25. *Brycon opalinus* (Cuvier).
Characinus amazonicus Agassiz.
Habitat: Brazil.
26. *Brycon falcatus* Müller & Troschel.
Habitat: Guianas.
27. *Brycon orbignianus* (Cuvier & Valenciennes).
Chalceus rhodopterus Cuvier & Valenciennes; *Brycon orthotænia* Günther.
Habitat: La Plata Basin.
28. *Brycon lundii* Lütken.
Habitat: Rio das Velhas.

OTHONOPHANES Eigenmann.

Type: *Brycon labiatus* Steindachner.
Range that of the single species.
1. *Othonophanes labiatus* (Steindachner).
Habitat: Cauca.

HOLOBRYCON Eigenmann.

Type: *Brycon pesu* Müller & Troschel.
Range that of the single species.
A1. *Holobrycon pesu* (Müller & Troschel).
Habitat: Guiana; Amazons.

SCISSOR Günther.

Type: *Scissor macrocephalus* Günther.
Range that of the single species.
1. *Scissor macrocephalus* Günther.
Habitat: Surinam.

PHENACOGASTER Eigenmann.

Type: *Tetragonopterus pectinatus* Cope.
Range: Amazons and Guiana.
A1. *Phenacogaster pectinatus* (Cope).
Habitat: Ecuador.
A2. *Phenacogaster bairdii* (Steindachner).
Astyanax tabatingæ Steindachner.
Habitat: Tabatinga.
3. *Phenacogaster megalostictus* Eigenmann.
Habitat: British Guiana.
4. *Phenacogaster microstictus* Eigenmann.
Habitat: British Guiana.

DEUTERODON Eigenmann.

Joinvillea Steindachner.
Type: *Deuterodon iguape* Eigenmann.
Range South Eastern Brazil to Nicaragua.
1. *Deuterodon iguape* Eigenmann.
Habitat: Rio Iguape, Santa Catharina.
2. *Deuterodon parahybæ* Eigenmann.
Habitat: Parahyba.
3. *Deuterodon pedri* Eigenmann.
Habitat: Santa Cruz.
4. *Deuterodon depressirostris* (Ribeiro).
Joinvillea rosæ Steindachner.
Habitat: Joinville, Santa Catharina, Brazil.
5. *Deuterodon nasutus* Meek.
Habitat: Nicaragua.
6. *Deuterodon pinnatus* Eigenmann.
Habitat: Essequibo Basin.
7. *Deuterodon potaroënsis* Eigenmann.
Habitat: Potaro River.

HEMIBRYCON Günther.

Type: *Hemibrycon polyodon* Günther.
Range: Peru; Ecuador; Trinidad.

1. *Hemibrycon guppii* (Regan).
Habitat: Trinidad.
2. *Hemibrycon tæniurus* (Gill).
Habitat: Trinidad.
A3. *Hemibrycon jelskii* (Steindachner).
Habitat: Peru.
4. **Hemibrycon polyodon** Günther.
Hemibrycon huambonicus (Steindachner).
Habitat: Western Ecuador and Peru.
A5. *Hemibrycon ipanguianus* (Cope).
Habitat: Ucayale.

PSEUDOCHALCEUS Kner.

Type: *Pseudochalceus lineatus* Kner.
Range: Western Ecuador and Rio Grande do Sul.

1. **Pseudochalceus lineatus** Kner.
Habitat: Western slopes of Ecuador.

HOLLANDICHTHYS Eigenmann.

Type: *Tetragonopterus multifasciatus* E. & N.

1. *Hollandichthys multifasciatus* (Eigenmann & Norris).
Pseudochalceus perstriatus Ribeiro; *Pseudochalceus affinis* Steindachner.
Habitat: Cubatao.

ASTYANAX Baird & Girard.

Pœcilurichthys Gill.

Type: *Astyanax argentatus* Baird & Girard.
Range: All streams of the eastern slope of South America north of Buenos Aires. Pacific slope of Central America and Mexico.

(PŒCILURICHTHYS Gill).

(Type: *P. brevoortii* Gill).

1. *Astyanax polylepis* (Günther).
Habitat: Guiana.
2. *Astyanax erythropterus* (Holmberg).
Habitat: La Plata Basin.
3. *Astyanax pellegrini* Eigenmann.
Habitat: Paraguay.
4. *Astyanax correntinus* (Holmberg).
Habitat: Parana.

A5. *Astyanax riveti* Pellegrin.
Habitat: Rio Pove, Ecuador.

6. **Astyanax festæ** (Boulenger).
Habitat: Western Ecuador.

A7. *Astyanax brevirostris* (Günther).
Tetragonopterus branckii Steindachner.
Habitat: Ecuador and Peru.

A8. *Astyanax asymmetricus* Eigenmann.
Habitat: Tabatinga.

A9. *Astyanax symmetricus* Eigenmann.
Habitat: Tabatinga.

A10. *Astyanax zonatus* Eigenmann.
Habitat: Tabatinga.

11. *Astyanax cordovæ* (Günther).
Habitat: Argentina.

A12. *Astyanax anterior* Eigenmann.
Habitat: Tabatinga.

A13. *Astyanax bourgeti* Eigenmann.
Habitat: Tabatinga.

14. *Astyanax abramoides* Eigenmann.
Habitat: Guiana.

A15. *Astyanax abramis* (Jenyns).
Habitat: Orinoco to La Plata.

A16. *Astyanax bimaculatus* (Linnæus).
Albula maculata Linnæus; *Tetragonopterus linnæi, orbignianus, gronovii* Cuvier & Valenciennes; *Pœcilurichthys brevoortii* Gill; *T. bartlettii* Günther; *T. orientalis* Cope; *T. microstoma* Hensel; *T. obscurus* Hensel; *T. caudimaculatus* Cope, and *? jacuhiensis* Cope.
Habitat: All streams from the Rio Bayano south to the La Plata and east of the Andes.

17. *Astyanax bimaculatus borealis* Eigenmann
Habitat: Magdalena Basin.

A18. *Astyanax bimaculatus paraguayensis* Eigenmann.
Habitat: Paraguay and Goyaz.

19. *Astyanax bimaculatus lacustris* Lütken.
Habitat: Rio San Francisco.

20. *Astyanax bimaculatus vittatus* Castelnau.
? T. bahiensis Steindachner.
Habitat: Bahia.

21. *Astyanax janeiroensis* Eigenmann.
Habitat: Rio de Janeiro.

A22. *Astyanax goyazensis* Eigenmann.
Habitat: Goyaz.

A23. *Astyanax longior* Cope.
Habitat: Marañon.

24. *Astyanax orthodus* Eigenmann.
Habitat: Truando.

25. *Astyanax potaroënsis* Eigenmann.
Habitat: Potaro River.

26. *Astyanax mucronatus* Eigenmann.
Habitat: Potaro River.

A27. *Astyanax stilbe* (Cope).
Habitat: Para.

28. *Astyanax caucanus* (Steindachner).
Habitat: Cauca.

29. *Astyanax atratoënsis* Eigenmann.
Habitat: Truando.

30. *Astyanax wappi* (Cuvier & Valenciennes).
Habitat: British Guiana.

(ASTYANAX Baird & Girard).

31. *Astyanax lineatus* (Perugia).
Habitat: Paraguay.

32. *Astyanax brevirhinus* Eigenmann.
Habitat: Jequitinhonha.

33. *Astyanax giton* Eigenmann.
Habitat: Parahyba.

A34. *Astyanax maximus* (Steindachner).
Tetragonopterus alosa Günther.
Habitat: Peru.

35. *Astyanax regani* Meek.
Habitat: Costa Rica.

36. *Astyanax globiceps* Meek.
Habitat: Costa Rica.

37. *Astyanax albeolus* Eigenmann.
Habitat: Costa Rica.

A38. *Astyanax fasciatus* (Cuvier).
Tetragonopterus rutilus Jenyns; *? T. viejita* Cuv. & Val.; *T. microstoma* Günther; *Astyanax carolinæ* Gill; *T. cuvieri; T. œrstedii* Lütken; *T. copei* Ulrey.
Habitat: Mexico to Patagonia. Apparently absent at Panama where it is replaced by *fischeri.*

39. *Astyanax fasciatus macrophthalmus* Regan.
Habitat: Mexico.

40. *Astyanax fasciatus jequitinhonhæ* Steindachner.
Habitat: Rio Jequitinhonha.

41. *Astyanax fasciatus nicaraguensis* Eigenmann & Ogle.
Habitat: Nicaragua.

42. *Astyanax fasciatus parahybæ* Eigenmann.
Habitat: Parahyba.

43. *Astyanax fasciatus œneus* (Günther).
T. panamensis, brevimanus and humilis Günther; *T. finitimus, belizianus, cobanensis* and *oaxacanensis* Bocourt.
Habitat: Mexico and Central America.

44. *Astyanax angustifrons* Regan.
Habitat: Mexico.

45. *Astyanax scabripinnis* (Jenyns).
T. jenynsii Steindachner; *A. microcephalus* Ribeiro.
Habitat: Parahyba to Santa Catharina.

46. *Astyanax scabripinnis laticeps* (Cope).
Habitat: Rio Grande do Sul.

47. *Astyanax scabripinnis rivularis* (Lütken).
Habitat: Rio San Francisco.

48. *Astyanax scabripinnis longirostris* Steindachner.
Habitat: Cubatao.

49. *Astyanax scabripinnis intermedius* Eigenmann.

Habitat: Rio Parahyba and Santa Clara.

50. *Astyanax tæniatus* (Jenyns).
Tetragonopterus fasciatus Steindachner and recent authors.
Habitat: Parahyba and northward.

51. *Astyanax eigenmanniorum* (Cope).
Habitat: São Paulo to Rio Primero.

52. *Astyanax mexicanus* (Philippi).
Astyanax argentatus Baird & Girard; *Tetragonopterus brevimanus* and *petenensis* Günther; *T. nitidus* and *fulgens* Bocourt; *T. streetsi* Cope.
Habitat: Rio Grande south to Central America.

53. *Astyanax fischeri* (Steindachner).
A. panamensis Steindachner, *non* Günther.
Habitat: Panama.

54. *Astyanax rubropictus* (Berg).
Habitat: Argentina, Territorio de los Andes.

A55. *Astyanax multidens* Eigenmann.
Habitat: Obidos.

56. *Astyanax mutator* Eigenmann.
Habitat: Upper Potaro.

A57. *Astyanax gracilior* Eigenmann.
Habitat: Villa Bella to Obidos.

A58. *Astyanax paucidens* Ulrey.
Habitat: Lower Amazon and tributaries.

59. *Astyanax guianensis* Eigenmann.
Habitat: British Guiana.

60. *Astyanax essequibensis* Eigenmann.
Habitat: British Guiana.

BRYCONAMERICUS Eigenmann.

Type: *Bryconamericus exodon* Eigenmann.
Range: La Plata to Rio Grande do Sul and to western Peru and Costa Rica.

1. *Bryconamericus exodon* Eigenmann.
Habitat: Rio Paraguay.

A2. *Bryconamericus heteresthes* Eigenmann.
Habitat: Tapajos.

3. *Bryconamericus stramineus* Eigenmann MS.
Habitat: Paracicaba and Rio Uruguay.

A4. *Bryconamericus mœnkhausii* (Eigenmann & Kennedy).
Habitat: Paraguay and Tabatinga.

5. *Bryconamericus boops* Eigenmann.
Habitat: Maldonado.

A6. *Bryconamericus phœnicopterus* (Cope).
Habitat: Ambyiacu.

7. *Bryconamericus alburnus* (Hensel).
Habitat: Rio Cadea.

A8. *Bryconamericus astictus* (Ulrey).
Habitat: Brazil.

A9. *Bryconamericus diaphanus* (Cope).
Habitat: Marañon Basin.

A10. *Bryconamericus breviceps* Eigenmann.
Habitat: Goyaz.

11. *Bryconamericus chapadæ* (Fowler).
Habitat: Paraguay Basin.

12. *Bryconamericus peruanus* (Müller & Troschel).
Tetragonopterus microphthalmus and *petenensis* Günther, in part; *T. simus* Boulenger.

13. *Bryconamericus scleroparius* (Regan).
Habitat: Costa Rica.

14. *Bryconamericus eigenmanni* (Evermann & Kendall).
Habitat: Cordoba, Argentina.

15. *Bryconamericus iheringii* (Boulenger).
Tetragonopterus pliodus Cope.
Habitat: Rio Grande do Sul and La Plata Basin.

16. *Bryconamericus emperador* (Eigenmann & Ogle).
Habitat: Panama.

17. *Bryconamericus hyphessus* Eigenmann.
Habitat: British Guiana.

PIABINA Reinhardt.

Type: *Piabina argenteus* Reinhardt.
Range: South Eastern Brazil.

1. *Piabina piquira* Eigenmann.

Habitat: Piracicaba.

2. *Piabina argentea* Reinhardt.
Habitat: Rio das Velhas Basin.

CREAGRUTUS Günther.

Type: *Leporinus mülleri* Günther.
Range: Peru to Caranca, on both slopes; Guiana.

A1. *Creagrutus peruanus* (Steindachner).
Creagrutus nasutus Günther.
Habitat: Peru.

A2. Creagrutus mülleri (Günther).
Creagrutus affinis Steindachner.
Habitat: Cauca and Ecuador.

3. *Creagrutus melanzonus* Eigenmann.
Habitat: Essequibo Basin.

ASTYANACINUS Eigenmann.

Type: *Tetragonopterus moorii* Boulenger.
Range that of the single species.

1. *Astyanacinus moorii* (Boulenger).
Habitat: Paraguay Basin.

CREATOCHANES Günther.

Type: *Salmo melanurus* Bloch.
Range: Guianas to Amazons.

A1. *Creatochanes melanurus* (Bloch).
Habitat: Guianas to Amazons.

2. *Creatochanes affinis* Günther.
Habitat: British and French Guiana.

3. *Creatochanes caudomaculatus* Günther.
Habitat: South America.

A4. *Creatochanes gracilis* Eigenmann.
Habitat: Tabajos.

BRYCOCHANDUS Eigenmann.

Type: *Brycochandus durbini* Eigenmann.
Range that of the single species.

A1. *Brycochandus durbini* Eigenmann.
Habitat: Rio Tapajos.

BRYCONOPS Kner.

Type: *Bryconops alburnoides* Kner.
Range: Rio Branco to Rio Guapore.

A1. *Bryconops alburnoides* Kner.
Bryconops alburnus Kner.
Habitat: Rio Guaporé.

A2. *Bryconops lucidus* Kner.
Habitat: Rio Branco.

CTENOBRYCON Eigenmann.

Type: *Tetragonopterus hauxwellianus* Cope.
Range: Amazons.

A1. *Ctenobrycon hauxwellianus* (Cope).
Tetragonopterus gibbicervix Pellegrin.
Habitat: Amazons; Paraguay.

A2. *Ctenobrycon multifasciatus* (Steindachner).
Habitat: Amazon.

3. *Ctenobrycon spilurus* (Cuvier & Valenciennes).
Habitat: Guianas.

4. *Ctenobrycon alleni* (Eigenmann & McAtee).
Habitat: Paraguay.

PSELLOGRAMMUS Eigenmann.

Type: *Hemigrammus kennedyi* Eigenmann.
Range that of the single species.

1. *Psellogrammus kennedyi* (Eigenmann).
Habitat: Paraguay Basin.

HEMIGRAMMUS Gill.

Holopristis Eigenmann.
Type: *Pœcilurichthys* (*Hemigrammus*) *unilineatus* Gill.
Range: Paraguay Basin; Rio Grande do Sul; Rio San Francisco Basin; Amazon and Trinidad.

1. *Hemigrammus nanus* (Reinhardt).
Habitat: San Francisco Basin.

2. *Hemigrammus ulreyi* (Boulenger).
Habitat: Paraguay Basin.

A3. *Hemigrammus cœruleus* Durbin.
Habitat: Manacapuru.

4. *Hemigrammus erythrozonus* Durbin.
Habitat: Erukin in British Guiana.

A5. *Hemigrammus levis* Durbin.
Habitat: Amazon.

A6. *Hemigrammus hyanuary* Durbin MS.
Habitat: Lake Hyanuary.

7. *Hemigrammus rodwayi* Durbin.
Habitat: British Guiana near the coast.

8. *Hemigrammus tridens* Eigenmann.
Habitat: Arroyo Pypucu, Paraguay.

9. *Hemigrammus iota* Durbin.
Habitat: Rockstone and Gluck Island, British Guiana.

10. *Hemigrammus analis* Durbin.
Habitat: Gluck Island, Wismar, British Guiana.

A11. *Hemigrammus lunatus* Durbin MS.
Habitat: Amazon.

A12. *Hemigrammus microstomus* Durbin MS.
Habitat: Amazon.

13. *Hemigrammus orthus* Durbin.
Habitat: Tukeit and Gluck Island, British Guiana.

A14. *Hemigrammus cuprcus* Durbin MS.
Habitat: Jatuarana, Lake Saraca.

15. *Hemigrammus cylindricus* Durbin.
Habitat: Tumatumari, Crab Falls, Rockstone and Gluck Island, British Guiana.

A16. *Hemigrammus unilineatus* Gill.
Habitat: Trinidad; Orinoco; Para.

A17. *Hemigrammus elegans* (Steindachner).
Habitat: Amazon.

18. *Hemigrammus micropterus* Meek.
Habitat: Orinoco.

A19. *Hemigrammus schmardæ* Steindachner.
Habitat: Amazons.

20. *Hemigrammus boulengeri* Eigenmann.
Habitat: Rio Grande do Sul.

21. *Hemigrammus ocellifer* Steindachner.
Habitat: Amazons.

22. *Hemigrammus matei* Eigenmann.
Habitat: Argentina.

HYPHESSOBRYCON Durbin.

Type: *Hemigrammus compressus* Meek.
Range: Mexico to Paraguay and Rio San Francisco.

1. *Hyphessobrycon callistus* (Boulenger).
Habitat: Matto Grosso.

A2. *Hyphessobrycon gracilis* (Reinhardt).
Habitat: San Francisco and Paraguay Basins; Amazon.

A3. *Hyphessobrycon riddlei* Meek.
Habitat: Lower Amazon.

A4. *Hyphessobrycon bellottii* (Steindachner).
Habitat: Amazons; Orinoco.

5. *Hyphessobrycon anisitsi* Eigenmann.
Habitat: Paraguay.

6. *Hyphessobrycon milleri* Durbin.
Habitat: Las Amates, Guatemala.

7. *Hyphessobrycon minor* Durbin.
Habitat: Konawaruk, British Guiana.

A8. *Hyphessobrycon serpæ* Durbin.
Habitat: Serpa.

A9. *Hyphessobrycon copelandi* Durbin.
Habitat: Tabatinga.

A10. *Hyphessobrycon bentosi* Durbin.
Habitat: Obidos.

11. *Hyphessobrycon rosaceus* Durbin.
Habitat: Gluck Island and Rockstone, British Guiana.

12. *Hyphessobrycon panamensis* Durbin.
Habitat: Panama.

A13. *Hyphessobrycon stramineus* Durbin MS.
Habitat: Tabatinga.

14. *Hyphessobrycon minimus* Durbin.
Habitat: Cane Grove Corner, British Guiana.

A15. *Hyphessobrycon melanzonatus* Durbin.
Habitat: Amazon.

16. *Hyphessobrycon cos* Durbin.
Habitat: Kangaruma, British Guiana.
17. *Hyphessobrycon stictus* Durbin.
Habitat: British Guiana near the coast.
18. *Hyphessobrycon lütkeni* (Boulenger).
Habitat: Paraguay and Rio Grande do Sul.
19. *Hyphessobrycon santæ* (Eigenmann).
Tetr. interrupta Lütken, *non* Jenyns.
Habitat: Rio San Francisco.
A20. *Hyphessobrycon inconstans* (Eigenmann & Ogle).
Habitat: Para.
A21. *Hyphessobrycon heterorhabdus* (Ulrey).
Habitat: Para.
A22. *Hyphessobrycon robustulus* (Cope).
Habitat: Peruvian Amazon.
23. *Hyphessobreon compressus* Meek.
Habitat: Papaloapam Basin, Mexico.

DERMATOCHEIR Durbin.

Type: *Dermatocheir catablepta* Durbin.
Range that of the single species.
1. *Dermatocheir catablepta* Durbin, 1909, 55.
Habitat: Tumatumari, British Guiana.

PRISTELLA Eigenmann.

Type: *Holopristis riddlei* Meek.
Range: Orinoco and Guiana.
1. *Pristella riddlei* (Meek).
Habitat: Orinoco and British Guiana.
2. *Pristella aubynei* Eigenmann.
Habitat: Mahaica Basin, British Guiana.

THAYERIA Eigenmann.

Type: *Thayeria obliqua* Eigenmann.
Range that of the single species.
A1. *Thayeria obliqua* Eigenmann.
Habitat: Amazon.

GYMNOCORYMBUS Eigenmann.

Type: *Gymnocorymbus thayeri* Eigenmann.
Range: Amazons; Paraguay.
A1. *Gymnocorymbus thayeri* Eigenmann.
Habitat: Amazon and Solimoens.
2. *Gymnocorymbus ternetzi* (Boulenger).
Habitat: Paraguay.

MŒNKHAUSIA Eigenmann.

Type: *Tetragonopterus xinguensis* Steindachner.
Range: Amazons and Paraguay.
A1. *Mœnkhausia steindachneri* Eigenmann.
Tetragonopterus lineatus Steindachner (*non* Perugia).
Habitat: Iquitos.
A2. *Mœnkhausia latissima* Eigenmann.
Habitat: Tabatinga.
A3. *Mœnkhausia jamesi* Eigenmann.
Habitat: Obidos and Içá.
A4. *Mœnkhausia justæ* Eigenmann.
Habitat: Amazon?
5. *Mœnkhausia doccana* (Steindachner).
Habitat: Eastern Brazil.
6. *Mœnkhausia chrysargyrea* (Günther).
Habitat: Essequibo.
7. *Mœnkhausia comma* Eigenmann.
Habitat: Cudajas.
A8. *Mœnkhausia melogramma* Eigenmann.
Habitat: Tabatinga.
A9. *Mœnkhausia oligolepis* (Günther).
Tetragonopterus agassizii Steindachner.
Habitat: Amazons to Guiana.
A10. *Mœnkhausia atahualpiana* (Fowler).
Habitat: Pebas.
11. *Mœnkhausia australis* Eigenmann.
Habitat: Paraguay.
A12. *Mœnkhausia grandisquamis* (Müller & Troschel).
Habitat: Surinam; Amazons.
13. *Mœnkhausia ovalis* (Günther).
Habitat: Guiana.
A14. *Mœnkhausia barbouri* Eigenmann.

Habitat: Villa Bella.

A15. *Mœnkhausia xinguensis* (Steindachner).
Habitat: Xingu.

A16. *Mœnkhausia megalops* Eigenmann.
Habitat: Gurupa to Itaituba; Guiana.

A17. *Mœnkhausia dichrourus* (Kner).
Habitat: Paraguay Basin and Amazons.

A18. *Mœnkhausia dichrourus intermedia* Eigenmann.
Habitat: Tabatinga.

A19. *Mœnkhausia lepidurus* (Kner).
Habitat: Amazons to Guianas.

A20. *Mœnkhausia lepidurus lata* Eigenmann.
Habitat: Tapajos.

A21. *Mœnkhausia lepidurus icæ* Eigenmann.
Habitat: Içá.

A22. *Mœnkhausia lepidurus gracillima* Eigenmann.
Habitat: Serpa and Villa Bella.

A23. *Mœnkhausia collettii* (Steindachner).
Habitat: Amazons; Guiana.

A24. *Mœnkhausia copei* (Steindachner).
Habitat: Para to Santarem.

A25. *Mœnkhausia cotinho* Eigenmann.
Habitat: Para.

A26. *Mœnkhausia ceros* Eigenmann.
Habitat: Lake Hyanuary.

27. *Mœnkhausia browni* Eigenmann.
Habitat: Potaro River above and below the Kaieteur.

28. *Mœnkhausia shideleri* Eigenmann.
Habitat: Essequibo Basin.

TETRAGONOPTERUS Cuvier.

Type: *Tetragonopterus argenteus* Cuvier.
Range: Orinoco and Guianas; Amazons and south to Rio Parahyba and La Plata.

A1. *Tetragonopterus argenteus* Cuvier.
T. rufipes Valenciennes; *T. sana* Castelnau.
Habitat: La Plata Basin to Guiana.

A2. *Tetragonopterus huberi* Steindachner.
Habitat: Rio Purus.

A3. *Tetragonopterus chalceus* Agassiz.
T. artedii and *schomburgkii* Cuvier & Valenciennes; *T. ortoni* Gill.
Habitat: Amazons and Guiana.

4. *Tetragonopterus gibbosus* Steindachner.
Habitat: Parahyba.

MARKIANA Eigenmann.

Type: *Tetragonopterus nigripinnis* Perugia.
Range La Plata and Orinoco.

1. *Markiana nigripinnis* (Perugia).
Tetragonopterus anomalus Steindachner.
Habitat: La Plata Basin.

2. *Markiana geayi* Pellegrin.
Habitat: Apuré, Venezuela.

Subfamily DIAPOMINÆ.

DIAPOMA Cope.

Type: *Diapoma speculiferum* Cope.
Range that of the single species.

1. *Diapoma speculiferum* Cope.
Habitat: Rio Grande do Sul.

Subfamily STEVARDIINÆ.

STEVARDIA Gill.

Corynopoma and *Nematopoma* Gill.
Type: *Stevardia albipinnis* Gill.
Range that of the single species.

1. *Stevardia albipinnis* Gill.
Corynopoma riisei and *veedonii* Gill; *Nematopoma searlsii* Gill.
Habitat: Trinidad.

Subfamily PIABUCININÆ.

PIABUCINA Cuvier & Valenciennes.

Type: *Piabucina erythrinoides* Cuvier & Valenciennes.

Range: Panama to British Guiana and Ecuador.

A1. *Piabucina unitæniata* Günther.
Habitat: Ecuador and British Guiana.

2. *Piabucina festæ* Boulenger.
Habitat: Panama.

3. *Piabucina panamensis* Gill.
Habitat: Panama.

4. *Piabucina erythrinoides* Cuvier & Valenciennes.

5. *Piabucina pleurotænia* Regan.
Habitat: Venezuela.

6. **Piabucina astrigata** Regan.
Habitat: Western slope of Ecuador.

A7. *Piabucina elongata* Boulenger.
Habitat: Eastern slope of Ecuador.

CHALCEUS Cuvier.

Pellegrinina Fowler.

Type: *Chalceus macrolepidotus* Cuvier.

Range that of the single species.

A1. *Chalceus macrolepidotus* Cuvier.
Chalceus ararapeera Cuvier & Valenciennes; *P. heterolepis* Fowler.
Habitat: Guiana.

PLETHODECTES Cope.

Type: *Plethodectes erythrurus* Cope.

Range that of the single species.

A1. *Plethodectes erythrurus* Cope.
Habitat: Peru.

Subfamily LEBIASININÆ.

LEBIASINA Cuvier & Valenciennes.

Type: *Lebiasina bimaculata* Cuvier & Valenciennes.

Range: Streams of western slopes of Peru and Ecuador.

1. **Lebiasina bimaculata** Cuvier & Valenciennes.
Habitat: Western slopes of Peru and Ecuador.

PHOXINOPSIS Regan.

Type: *Phoxinopsis typicus* Regan.

Range that of the single species.

1. *Phoxinopsis typicus* Regan,
Regan, 1907*b*, 262.
Habitat: Argentina.

Subfamily GASTEROPELECINÆ.

GASTEROPELECUS Gronow.

Type: *Clupea sternicla* Linnæus.

Range: Amazons.

A1. *Gasteropelecus sternicla* (Linnæus).
Salmo gasteropelecus Pallas.
Habitat: Amazons.

CARNEGIELLA Eigenmann.

Type: *Gasteropelecus strigatus* Günther.

Range that of the single species.

A1. *Carnegiella strigata* (Günther).
Gasteropelecus fasciatus Garman.
Habitat: Amazons and Guiana.

PTERODISCUS Eigenmann.

Type: *Pterodiscus levis* Eigenmann.

Range that of the single species.

A1. *Pterodiscus levis* Eigenmann.
Habitat: Para.

THORACOCHARAX Fowler.

Type: *Gasteropelecus stellatus* Kner.

Range: Panama to Paraguay.

A1. *Thoracocharax stellatus* (Kner).
? Gasteropelecus securis Philippi.
Habitat: Amazons; Paraguay; Orinoco.

A2. *Thoracocharax pectorosus* (Garman).
Habitat: Amazons.

4. *Thoracocharax maculatus* (Steindachner).
Habitat: Panama.

CHALCINUS Cuvier & Valenciennes.

Triportheus Cope.
Type: *Chalcinus brachypomus* Cuvier & Valenciennes = *Chalceus angulatus* Agassiz.
Range: Magdalena to Guiana and south to Rio San Francisco on the east, and the La Plata Basin on the west.

1. *Chalcinus pictus* Garman.
Habitat: Jutahy.

2. *Chalcinus paranensis* Günther.
Habitat: Parana and Paraguay rivers

A3. *Chalcinus angulatus* Spix.
Chalcinus brachypomus Cuvier & Valenciennes; *Chalcinus mülleri* Philippi; *Chalcinus trifurcatus* Castelnau; *Chalcinus nematurus* Kner; *Triportheus flavus* Cope.
Habitat: Orinoco; Amazons; Paraguay.

A4. *Chalcinus angulatus curtus* Garman.
Habitat: Paraguay; Amazon.

A5. *Chalcinus angulatus vittatus* Garman.
Habitat: Amazon.

6. *Chalcinus angulatus signatus* Garman.
Habitat: Rio Puty.

A7. *Chalcinus angulatus fuscus* Garman.
Habitat: Amazon.

A8. *Chalcinus güntheri* Garman.
Chalceus rotundatus Schomburgk; *Chalcinus brachypomus* Günther (*non* Cuvier & Valenciennes).
Habitat: Guianas; Amazon; San Francisco.

A9. *Chalcinus albus* (Cope).
Chalcinus knerii Steindachner.
Habitat: Amazons.

A10. *Chalcinus auritus* Cuvier & Valenciennes.
Habitat: Araguay.

A11. *Chalcinus elongatus* Günther.
Habitat: Orinoco; Amazons.

12. *Chalcinus magdalenæ* Steindachner.
Habitat: Magdalena Basin.

COSCINOXYRON Fowler.

Type: *Chalcinus culter* Cope.
Range that of the single species.

A1. *Coscinoxyron culter* (Cope).
Habitat: São Paulo on the Amazon.

PSEUDOCORYNOPOMA Perugia.

Bergia Steindachner, *Chalcinopelecus* Holmberg.
Type: *Pseudocorynopoma doriæ* Perugia.
Range that of the single species.

1. *Pseudocorynopoma doriæ* Perugia.
Bergia altipinnis Steindachner; *Chalcinopelecus argentinus* Holmberg.
Habitat: La Plata Basin.

Subfamily AGONIATINÆ.

AGONIATES Müller & Troschel.

Type: *Agoniates halecinus* Müller & Troschel.
Range that of the single species.

1. *Agoniates halecinus* Müller & Troschel.
Habitat: Guiana.

PIABUCUS Oken.

Type: *Salmo argentinus* Linnæus = *Piabucus dentatus* Kœlreuter.
Range: Guiana; Amazons; La Plata.

A1. *Piabucus spilurus* Günther.
Habitat: Amazons.

A2. *Piabucus dentatus* Kœlreuter.
Salmo argentinus Linnæus.
Habitat: Guianas; Iquitos.

3. *Piabucus melanostomus* Holmberg.
Habitat: La Plata Basin.

A4. *Piabucus purusii* Steindachner.
Habitat: Rio Purus.

PARAGONIATES Steindachner.

Type: *Paragoniates alburnus* Steindachner.

Range: Amazons and southeastern Brazil.

A1. *Paragoniates alburnus* Steindachner.
Habitat: Solimoens and Marañon.

A2. *Paragoniates mülleri* Steindachner.
Habitat: Obidos.

3. *Paragoniates microlepis* Steindachner.
Habitat: Southeastern Brazil.

LEPTAGONIATES Boulenger.

Type: *Leptagoniates steindachneri* Boulenger.

Range that of the single species.

A1. *Leptagoniates steindachneri* Boulenger.
Habitat: Sarayacu, Peru.

Subfamily STICHANODONTINÆ.

STICHANODON Eigenmann.

Type: *Lütkenia insignis* Steindachner.

Range that of the single species.

A1. *Stichanodon insignis* Steindachner.
Habitat: Amazon.

Subfamily STETHAPRIONINÆ.

POPTELLA Eigenmann.

Type: *Tetragonopterus longipinnis* Popta.

Range that of the single species.

1. *Poptella longipinnis* (Popta).
Habitat: Dutch Guiana.

STETHAPRION Cope.

Type: *Stethaprion erythrops* Cope.

Range: Amazons and Santa Cruz.

A1. *Stethaprion erythrops* Cope.
Habitat: Amazons.

A2. *Stethaprion chryseum* Cope.
Habitat: Marañon.

FOWLERINA Eigenmann.

Type: *Tetragonopterus compressus* Günther.

Range: Paraguay to British Guiana and eastern Brazil.

A1. *Fowlerina orbicularis* (Cuvier & Valenciennes).
Tetragonopterus compressus Günther.
Habitat: Amazons and Guiana.

2. *Fowlerina paraguayensis* Eigenmann.
Habitat: Paraguay; Eastern Brazil.

BRACHYCHALCINUS Boulenger.

Type: *Brachychalcinus retrospina* Boulenger.

Range Upper Amazon; Paraguay.

A1. *Brachychalcinus copei* Steindachner.
Habitat: Tabatinga.

2. *Brachychalcinus retrospina* Boulenger.
Habitat: Santa Cruz; Descalvados.

Subfamily SERRASALMONINÆ.

PYGOPRISTIS Müller & Troschel.

Type: *Pygopristis fumarius* Müller & Troschel = *Serrasalmo denticulatus* Cuvier.

Range: Paraguay to Guiana.

A1. *Pygopristis denticulatus* (Cuvier).
Pygopristis fumarius Müller & Troschel; *Serrasalmo punctatus* Schomburgk.
Habitat: Guianas to Amazon.

2. *Pygopristis serrulatus* (Cuvier & Valenciennes).
Habitat: Matto Grosso and Paraguay.

PYGOCENTRUS Müller & Troschel.

Type: *Serrasalmo piraya* Cuvier.

Range: Orinoco to La Plata and Rio das Velhas; not in coastwise streams of southeastern Brazil.

1. *Pygocentrus niger* (Schomburgk).
   Habitat: Upper courses of all streams of Guiana.

A2. *Pygocentrus piraya* (Cuvier).
   Serrasalmo paranha Agassiz; *? Serrasalmo nigricans* Agassiz; *Pygocentrus bidorsalis* Natterer.
   Habitat: Guiana; Amazon to Rio das Velhas and Paraguay.

3. *Pygocentrus notatus* (Lütken).
   Habitat: Venezuela.

A4. *Pygocentrus scapularis* (Günther).
   Habitat: British Guiana to Para.

A5. *Pygocentrus altus* Gill.
   Habitat: Marañon.

A?6. *Pygocentrus nattereri* (Kner).
   Habitat: La Plata Basin; ? Orinoco.

7. *Pygocentrus bilineatus* Eigenmann.
   Habitat: North Western Guiana.

8. *Pygocentrus ternetzi* Steindachner.
   Habitat: Rio Paraguay.

A9. *Pygocentrus calmoni* Steindachner.
   Habitat: Rio Para.

A10. *Pygocentrus striolatus* Steindachner.
   Habitat: Para.

SERRASALMO Lacépède.

Type: *Salmo rhombeus* Linnæus.

Range: Orinoco to Guianas, south to the Rio das Velhas and Paraguay and Bolivia.

A1. *Serrasalmo elongatus* Kner.
   Habitat: Rios Guaporé and Huallaga.

A2. *Serrasalmo gibbus* Castelnau.
   Habitat: Araguay.

A3. *Serrasalmo marginatus* Valenciennes.
   Serrasalmo humeralis Castelnau, not of Cuvier & Valenciennes; *Serrasalmo irritans* Peters; *Serrasalmo iridopsis* Ulrey (*non* Cope).
   Habitat: La Plata Basin; Orinoco; Amazons; Rio das Velhas.

4. *Serrasalmo brandtii* Lütken.
   Habitat: Rio San Francisco.

A5. *Serrasalmo gymnogenys* Günther.
   Habitat: Amazon and Paraguay.

A6. *Serrasalmo iridopsis* Cope.
   Habitat: Ambyiacu.

A7. *Serrasalmo æsopus* Cope.
   Habitat: Solimoens and Marañon.

A8. *Serrasalmo maculatus* Kner.
   Pygocentrus melanurus Heckel; *Pygocentrus nigricans* Heckel.
   Habitat: Amazons and Bolivia.

A9. *Serrasalmo spilopleura* Kner.
   ? Serrasalmo aureus Agassiz; *Pygocentrus dulcis* Heckel.
   Habitat: Guianas to Paraguay and Bolivia.

A10. *Serrasalmo humeralis* Cuvier & Valenciennes.
   Habitat: Amazons and Paraguay.

A11. *Serrasalmo immaculatus* Cope.
   Habitat: Peruvian Amazon.

A?12. *Serrasalmo rhombeus* (Linnæus).
   Habitat: Guianas; Paraguay.

A13. *Serrasalmo paraënsis* Steindachner.
   Habitat: Rio Para.

Subfamily MYLINÆ.

MYLESINUS Cuvier & Valenciennes.

Type: *Mylesinus schomburgkii* Cuvier & Valenciennes.

Range that of the single species.

1. *Mylesinus schomburgkii* Cuvier & Valenciennes.
   Habitat: Guiana; Rio Vaupes.

CATOPRION Müller & Troschel.

Type: *Serrasalmo mento* Cuvier.

Range that of the single species.

A1. *Catoprion mento* (Cuvier).

Mylesinus macropterus Ulrey.
Habitat: Guianas to Rio Guaporé.

ACNODON Eigenmann.

Type: *Myletus oligocanthus* Müller & Troschel.
Range that of the single species.

A1. *Acnodon oligocanthus* (Müller & Troschel).
Habitat: Guianas and Brazil.

PIARACTUS Eigenmann.

Type: *Myletes brachypomus* Cuvier.
Range: Orinoco to La Plata; not in coastwise streams of southeastern Brazil.

A1. *Piaractus brachypomus* (Cuvier).
? Myletes pacu Humboldt.
Habitat: La Plata Basin and Guaporé.

A2. *Piaractus macropomus* (Cuvier).
Habitat: Orinoco and Matto Grosso.

METYNNIS Cope.

Sealeina Fowler.
Type: *Metynnis luna* Cope.
Range: Guianas to Paraguay.

A1. *Metynnis hypsauchen* (Müller & Troschel).
Habitat: Guianas; Amazons to Rio Guaporé and Paraguay.

A2. *Metynnis maculatus* (Kner).
Habitat: Guiana to Rio Parana.

A3. *Metynnis lippincottianus* (Cope).
Habitat: Para.

A4. *Metynnis luna* Cope.
Myletes hypsauchen Ulrey.
Habitat: Amazons.

5. *Metynnis gœldii* Eigenmann.
Myletes lippincottianus Ulrey (*non* Cope).
Habitat: Brazil.

6. *Metynnis mola* Eigenmann & Kennedy.
Habitat: Paraguay Basin.

7. *Metynnis unimaculatus* Steindachner.
Habitat: Rio Parnahyba.

MYLEUS Müller & Troschel.

Tometes Cuv. & Val.; *Myloplus* Gill.
Type: *Myleus setiger* Müller & Troschel.
Range: Orinoco and Guianas to the Paraguay and Rio San Francisco; not in coastwise streams of southeastern Brazil.

A1. *Myleus setiger* Müller & Troschel.
Myletes doidyxodon Cuvier & Valenciennes; *Tometes trilobatus* Cuvier & Valenciennes; *Myletes filosus* Heckel.
Habitat: Guiana to Matto Grosso.

2. *Myleus schomburgkii* (Jardine).
Myletes palometa Cuvier & Valenciennes; *Myletes divaricatus* Cuvier & Valenciennes; *Myletes pacu* Schomburgk.
Habitat: Essequibo.

A3. *Myleus torquatus* (Kner).
Habitat: Rio Branco.

4. *Myleus ellipticus* (Günther).
Habitat: Essequibo.

5. *Myleus knerii* (Steindachner).
Habitat: Guiana.

A6. *Myleus discoideus* (Kner).
Habitat: Bananeira; Rio Branco; Matto Grosso.

A7. *Myleus rhomboidalis* (Cuvier).
Tetragonopterus latus Schomburgk.
Habitat: Guiana and Amazon.

A8. *Myleus parma* Günther.
Habitat: Amazon Basin.

9. *Myleus micans* (Lütken).
Habitat: San Francisco Basin.

10. *Myleus rubripinnis* Müller & Troschel.
Habitat: Essequibo.

11. *Myleus tiete* (Eigenmann & Norris).
Habitat: Piracicaba.

A?12. *Myleus asterias* (Müller & Troschel).
Habitat: Guianas and Paraguay.

A13. *Myleus altipinnis* Cuvier & Valenciennes.
Habitat: Rios Cipo and San Francisco.

14. *Myleus levis* Eigenmann & McAtee.
Habitat: Paraguay.

A15. *Myleus orbicularis* Steindachner.
Habitat: Santarem.
16. *Myleus orinocensis* Steindachner.
Habitat: Orinoco.

COLOSSOMA Eigenmann.

Waiteina and *Reganina* Fowler.
Type: *Myletes oculus* Cope.
Range: Amazon and La Plata Basins. Not in southeastern coastwise streams.
A1. *Colossoma oculus* (Cope).
Habitat: Ambyiacu.
A2. *Colossoma nigripinnis* (Cope).
Habitat: Amazons.
3. *Colossoma mitrei* (Berg).
Habitat: Parana.
A4. *Colossoma bidens* (Agassiz).
Habitat: Amazons.
5. *Colossoma orbignyanum* (Cuvier & Valenciennes).
Habitat: La Plata Basin.
6. *Colossoma herniarium* (Cope).
Habitat: Peruvian Amazon.

MYLOSOMA Eigenmann.

Type: *Myletes albiscopus* Cope.
Range: Guiana and Orinoco to the La Plata Basin; not in the coastwise streams of southeastern Brazil.
A1. *Mylosoma aureum* (Spix).
Myletes auriventris Cuvier.
Habitat: Orinoco to La Plata Basin.
A2. *Mylosoma albiscopus* (Cope).
Habitat: Ambyiacu.

Subfamily CYNODONTINÆ.

RHAPHIODON Agassiz.

Type: *Rhaphiodon vulpinus* Spix.
Range that of the single species.
A1. *Rhaphiodon vulpinus* Spix.
Habitat: Orinoco to La Plata.

CYNODON Spix.

Type: *Cynodon gibbus* Spix.
Range that of the single species.
A1. *Cynodon gibbus* Spix.
Habitat: Amazon to Rio Mamore.

HYDROLYCUS Müller & Troschel.

Type: *Hydrocyon scomberoides* Cuvier.
Range: Amazons south to the Araguay and north in the Guianas to Orinoco.
A1. *Hydrolycus scomberoides* (Cuvier).
Habitat: Orinoco and Guianas; Amazons and south to Araguay.
A2. *Hydrolycus copei* Gill.
Habitat: Marañon.
A3. *Hydrolycus pectoralis* Günther.
Habitat: Marañon.

Subfamily CHARACINÆ.

ASIPHONICHTHYS Cope.

Type: *Asiphonichthys stenopterus* Cope.
Range that of the single species.
1. *Asiphonichthys stenopterus* Cope.
Habitat: Jacuhy.

CHARAX Scopoli.

Epicyrtus Müller & Troschel; *Anacyrtus* Günther; *Cynopotamus* C. & V.; *Cyrtocharax* Fowler.
Type: *Salmo gibbosus* Linnæus.
Range: Guiana; Amazons; Paraguay.
A1. *Charax tectifer* (Cope).
C. sanguineus Cope.
Habitat: Ecuador.
A2. *Charax gibbosa* (Linnæus).
Epicyrtus macrolepis Kner.
Habitat: Guianas; Amazons and Paraguay.
A3. *Charax pauciradiata* (Günther).
Habitat: Amazons.
A4. *Charax limæsquamis* (Cope).
Habitat: Marañon.

A5. *Charax amazonum* (Günther).
Habitat: Ecuador.
6. *Charax argentea* Valenciennes.
Habitat: La Plata and Paraguay.
7. *Charax atratoënsis* Eigenmann.
Habitat: Atrato.
8. *Charax squamosa* Eigenmann & Kennedy.
Habitat: Paraguay.
9. *Charax caliura* Eigenmann & Kennedy.
Habitat: Paraguay.

RŒSTES Günther.

Type: *Cynoptamus molossus* Kner.
Range that of the single species.
1. *Rœstes molossus* (Kner).
Habitat: Amazons south to Paraguay.

GILBERTOLLUS.

Gilbertella Eigenmann.
Type: *Anacyrtus* (*Rœstes*) *alatus* Steindachner.
Range: that of the single species.
1. *Gilbertollus alatus* (Steindachner).
Habitat: Rio Magdalena.

BRAMOCHARAX Gill.

Type: *Bramocharax bransfordii* Gill.
Range: Central America.
1. *Bramocharax bransfordii* Gill.
Habitat: Lake Nicaragua.
2. *Bramocharax elongatus* Meek, M., 1907, 110.
Habitat: Nicaragua.

RŒBOIDES Günther.

Type: *Epicyrtus microlepis* Reinhardt.
Range: Panama to the Orinoco; Amazons south to the Rio das Velhas and the Paraguay.
A1. *Rœboides microlepis* (Reinhardt).
? *Epicyrtus gibbosus* Cuvier & Valenciennes (*non* Linnæus).
Habitat: Obidos; Paraguay Basin; Mamori River in Bolivia.
2. *Rœboides guatemalensis* Günther.
Habitat: Rios Chagres and Huamuchala.
A3. *Rœboides affinis* (Günther).
Rœboides rubrivertex Cope.
Habitat: Amazons and Orinoco.
4. *Rœboides bonariensis* Steindachner.
Rœboides microlepis Eigenmann & Kennedy (*non* Reinhardt).
Habitat: La Plata Basin.
A5. *Rœboides myersii* Gill.
Habitat: Amazons.
6. *Rœboides prognathus* (Boulenger).
Habitat: Paraguay Basin.
A7. *Rœboides bicornis* Cope.
Habitat: Pebas.
A8. *Rœboides xenodon* (Lütken).
Habitat: Rio das Velhas; Amazons.
9. *Rœboides dayii* Steindachner.
Habitat: Magdalena Basin.
10. *Rœboides francisci* Steindachner.
Habitat: Rio San Francisco.

EUCYNOPOTAMUS Fowler.

Type: *Cynopotamus gulo* Cope.
Range: Magdalena; Peruvian Amazon; Araguay and La Plata Basin.
A?1. *Eucynopotamus magdalenæ* (Steindachner).
Habitat: Magdalena Basin; Rio Paraguay.
A2. *Eucynopotamus humeralis* (Valenciennes).
Habitat: La Plata Basin; Goyaz.
A3. *Eucynopotamus gulo* (Cope).
Habitat: Pebas.
A4. *Eucynopotamus knerii* (Steindachner).
Cynopotamus humeralis Kner (*non* Valenciennes).
Habitat: La Plata Basin and Peruvian Amazon.

EVERMANNOLUS Eigenmann.

Evermannella, Eigenmann.
Type: *Cynopotamus biserialis* Garman.
Range that of the single species.

A1. *Evermannolus biserialis* (Garman).
Habitat: Amazons.

SALMINUS Agassiz.

Type: *Hydrocyon brevidens* Valenciennes=*Salminus maxillosus* Cuvier & Valenciennes.
Range: Cauca to Ecuador; Amazon to Rio San Francisco and the La Plata Basin; Rio Grande do Sul.

1. *Salminus maxillosus* Cuvier & Valenciennes.
Hydrocyon brevidens Valenciennes, *non* Cuvier; *Salminus brevidens* Eigenmann & Eigenmann, *non* Cuvier; *? Salminus orbignyanus* Cuvier & Valenciennes.
Habitat: La Plata Basin.

2. **Salminus affinis** Steindachner.
Habitat: Cauca and Rio Santiago, Ecuador.

A3. *Salminus brevidens* Cuvier.
Salminus cuvieri Cuvier & Valenciennes.
Habitat: Rio Cipo and La Plata Basin.

A4. *Salminus hilarii* Cuvier & Valenciennes.
Habitat: Amazon; San Francisco; Parana and Paraguay Basins.

CATABASIS Eigenmann & Norris.

Type: *Catabasis acuminatus* Eigenmann & Norris.
Range that of the single species.

1. *Catabasis acuminatus* Eigenmann & Norris.
Habitat: Rio Tieté.

EXODON Müller & Troschel.

Hystricodon Günther.
Type: *Exodon paradoxus* Müller & Troschel.
Range that of the single species.

A1. *Exodon paradoxus* Müller & Troschel.
Epicyrtus exodon Cuvier & Valenciennes.
Habitat: Guiana; Amazon.

Subfamily HYDROCYNINÆ.

HYDROCYNUS Cuvier.

Type: *Hydrocynus lucius* Cuvier.
Range: Maracaibo to Guianas, south to Amazons.

1. *Hydrocynus lucius* Cuvier.
Habitat: Not known.

(XIPHOSTOMA Spix.)

(Type: *Xiphostoma cuvieri* Agassiz.)

A2. *Hydrocynus cuvieri* (Agassiz).
Xiphostoma oseryi (Castelnau).
Habitat: Guianas and Amazons.

A3. *Hydrocynus ocellatus* (Schomburgk).
Habitat: Guiana to Solimoens.

A4. *Hydrocynus maculatus* Cuvier & Valenciennes.
Xiphostoma tœdo Cope.
Habitat: Amazons.

A5. *Hydrocynus longipinnis* (Steindachner).
Habitat: Rio Negro.

BOULENGERELLA Eigenmann.

Type: *Xiphostoma lateristriga* Boulenger.
Range that of the single species.

A1. *Boulengerella lateristriga* (Boulenger).
Habitat: Manaos.

LUCIOCHARAX Steindachner.

Ctenolucius Gill (nomen nudum); *Belonocharax* Fowler.
Type: *Luciocharax insculptus* Steindachner.
Range: Lake Maracaibo to the Atrato.

1. *Luciocharax insculptus* Steindachner.
Belonocharax beani Fowler.
Habitat: Magdalena Basin.

2. *Luciocharax hujeta* (Cuvier & Valenciennes).
Habitat: Lake Maracaibo.

Subfamily ACESTRORHAMPHINÆ.

OLIGOSARGUS Günther.

Type: *Oligosargus argenteus* Günther.
Range that of the single species.

1. *Oligosargus argenteus* Günther.
Habitat: Brazil.

ACESTRORHYNCHUS Eigenmann.

Xiphorhynchus and *Xiphorhamphus* Müller & Troschel.
Type: *Salmo falcatus* Bloch.
Range: Guiana to Rio San Francisco and Paraguay Basins.

A1. *Acestrorhynchus falcirostris* (Cuvier).
Habitat: Guiana to Matto Grosso.

A2. *Acestrorhynchus heterolepis* (Cope).
Habitat: Peruvian Amazon.

A3. *Acestroryhnchus microlepis* (Schomburgk).
Habitat: Guianas to the Amazon.

A4. *Acestrorhynchus falcatus* (Bloch).
Xiphorhamphus ferox Günther.
Habitat: Guiana to Rio Paraguay.

5. *Acestrorhynchus lacustris* (Lütken).
Habitat: San Francisco Basin.

ACESTRORHAMPHUS Eigenmann.

Sphyrænocharax Fowler.
Type: *Xiphorhamphus hepsetus* Cuvier.
Range: La Plata Basin and southeastern Brazil.

1. *Acestrorhamphus macrolepis* (Steindachner).
Habitat: Jequitinhonha.

2. *Acestrorhamphus brachycephalus* (Cope).
Habitat: Rio Grande do Sul.

3. *Acestrorhamphus jenynsii* (Günther).
Hydrocyon hepsetus Jenyns (*non* Cuvier).
Habitat: La Plata and southeastern Brazil.

4. *Acestrorhamphus oligolepis* (Steindachner).
Habitat: La Plata.

5. *Acestrorhamphus hepsetus* (Cuvier).
Hydrocyon falcatus Quoy & Gaimard.
Habitat: La Plata and southeastern Brazil.

6. *Acestrorhamphus pericoptes* Müller & Troschel.
Habitat: Brazil.

A7. *Acestrorhamphus abbreviatus* (Cope).
Habitat: Peruvian Amazon.

ACESTROCEPHALUS Eigenmann.

Type: *Xiphorhamphus anomalus* Steindachner.
Range that of the single species.

1. *Acestrocephalus anomalus* (Steindachner).
Habitat: Cauca.

Subfamily ERYTHRININÆ.

HOPLIAS Gill.

Macrodon Müller.
Type: *Esox malabaricus* Bloch.
Range: Atlantic slope north of La Plata; Pacific slope, Ecuador and northward.

1. **Hoplias microlepis** (Günther).
Habitat: Western slopes of South America from Ecuador to Panama; eastern slope of Panama.

A2. *Hoplias malabaricus* (Bloch).
Erythrinus trahira Spix; *Erythrinus macrodon* Agassiz; *Erythrinus microcephalus* Agassiz; *Erythrinus brasiliensis* Spix; *Macrodon guavina* Valenciennes; *Macrodon auritus* Cuvier & Valenciennes; *Macrodon teres* Cuvier & Valenciennes; *Macrodon patana* Cuvier & Valenciennes; *Macrodon aimara* Cuvier &

Valenciennes; *Macrodon ferox* Gill; *Macrodon intermedius* Günther.

Habitat: Eastern slope of South America from La Plata to Rio Magdalena and Huallaga.

3. *Hoplias malabaricus microphthalmus* Pellegrin.

Habitat: French Guiana.

4. *Hoplias lacerdæ* Ribeiro, Ribeiro, 1908.

Habitat: Ribeira.

HOPLERYTHRINUS Gill.

Ophiocephalops Fowler.

Type: *Erythrinus unitæniatus* Spix.

Range: From the La Plata to the Orinoco, including south-eastern coastwise streams.

A1. *Hoplerythrinus unitæniatus* (Spix).

Erythrinus vittatus Cuvier & Valenciennes; *Erythrinus cinereus* Gill; *Erythrinus kessleri* Steindachner.

Habitat: La Plata to Guiana and Peru; Trinidad.

2. *Hoplerythrinus salvus* (Agassix).

Erythrinus gronovii Cuvier & Valenciennes.

Habitat: San Francisco; Guiana; Orinoco.

ERYTHRINUS Gronow.

Type: *Cyprinus cylindricus* Linnæus.

Range: Rio Janeiro to Surinam and Peru.

A1. *Erythrinus erythrinus* (Bloch & Schneider).

Cyprinus cylindricus Linnæus; *Cyprinus cephalus* Linnæus; *Erythrinus salmoneus* Gronow; *Erythrinus brevicauda* Günther.

Habitat: Rio Janeiro to Surinam and Peru.

2. *Erythrinus longipinnis* Günther.

Habitat: Essequibo.

Family GYMNOTIDÆ.[1]

STERNARCHUS Bloch & Schneider.

Type: *Gymnotus albifrons* Linnæus.

Range: Paraguay, Parana and San Francisco to the Orinoco.

1. *Sternarchus brasiliensis* Reinhardt.

Habitat: Basin of the Rio San Francisco and the Parana and Paraguay.

A2. *Sternarchus albifrons* (Linnæus).

Sternarchus lacépèdii Castelnau; *Sternarchus maximilliani* Castelnau.

Habitat: Guianas, Amazons and Paraguay.

A3. *Sternarchus bonapartii* Castelnau.

Habitat: Amazons.

A4. *Sternarchus macrolepis* Steindachner.

Habitat: Amazon near mouth of Rio Negro; Guiana.

STERNARCHELLA Eigenmann and Ward.

Type: *Sternarchus schotti* Steindachner.

Range: Amazons.

A1. *Sternarchella schotti* (Steindachner).

Habitat: Amazons, from the Barra do Rio Negro to Peru.

A2. *Sternarchella balænops* (Cope).

Habitat: Peruvian Amazon.

STERNARCHOGITON Eigenmann & Ward.

Type: *Sternarchus nattereri* Steindachner.

Range: Rio Negro and Orinoco.

A1. *Sternarchogiton nattereri* (Steindachner).

Habitat: Barra do Rio Negro.

2. *Sternarchogiton sachsi* (Peters).

Habitat: Orinoco.

[1] For the details concerning this family, see Eigenmann & Ward, Proc. Wash. Acad Sci., vii, pp. 159–188.

STERNARCHORHAMPHUS Eigenmann & Ward.

Type: *Sternarchus mülleri* Steindachner.

Range: Para to Peru.

A1. *Sternarchorhamphus macrostomus* (Günther).

Habitat: Peruvian Amazon.

A2. *Sternarchorhamphus mülleri* (Steindachner).

Habitat: Para.

A3. *Sternarchorhamphus tamandua* (Boulenger).

Habitat: Jurua.

STERNARCHORHYNCHUS Castelnau.

Type: *Sternarchoryhnchus mülleri* Castelnau=*Sternarchus oxyrhynchus.* Müller & Troschel.

Range: Peruvian Amazon to Guiana.

A1. *Sternarchorhynchus mormyrus* (Steindachner).

Habitat: Marabitanos; Peruvian Amazon.

2. *Sternarchorynchus oxyrhynchus* (Müller & Troschel).

Sternarchorhynchus mülleri Castelnau.

Habitat: Guiana.

A3. *Sternarchorhynchus curvirostris* (Boulenger).

Habitat: Canelos.

RHAMPHICHTHYS Müller & Troschel.

Type: *Gymnotus rostratus* Linnæus.

Range: Rio de La Plata to Guiana.

A1. *Rhamphichthys rostratus* (Linnæus).

Gymnotus longirostris. Lacépède; *Rhamphichthys schomburgkii* and *schneideri* Kaup.

Habitat: The Guianas to the Amazons.

A2. *Rhamphichthys marmoratus* Castelnau.

Rhamphichthys pantherinus and *lineatus* Castelnau.

Habitat: Orinoco and Guiana south to the Rio de La Plata.

A3. *Rhamphichthys reinhardtii* (Kaup).

Rhamphichthys blochii Kaup.

Habitat: Rio Negro south to Paraguay.

HYPOPOMUS Gill.

Type: *Rhamphichthys mülleri* Kaup.

Range: Paraguay to Cauca.

1. *Hypopomus artedi* (Kaup).

Rhamphichthys mülleri Kaup.

Habitat: French Guiana.

A2. *Hypopomus brevirostris* (Steindachner).

Habitat: Cauca; Guiana to Paraguay.

STEATOGENYS Boulenger.

Type: *Rhamphichthys elegans* Steindachner.

Range that of the single species.

A1. *Steatogenys elegans* (Steindachner).

Rhamphichthys mirabilis Steindachner.

Habitat: Solimoens and tributaries; Guiana.

EIGENMANNIA Jordan & Evermann.

Type: *Sternopygus humboldtii* Steindachner.

Range: Rio de La Plata to Rio Magdalena and Pacific slope of Panama.

1. *Eigenmannia microps* (Boulenger).

Habitat: British Guiana.

2. Eigenmannia humboldtii (Steindachner).

Habitat: Marajo; Magdalena; Mamoni.

A3. *Eigenmannia virescens* (Valenciennes).

Sternopygus tumifrons and *lineatus* Müller & Troschel; *Sternopygus microstomus* Reinhardt; *Sternopygus limbatus* Schreiner.

Habitat: Rio Magdalena to the Rio de La Plata and Rio San Francisco.

A4. *Eigenmannia axillaris* (Günther).

Habitat: Para.

A5. *Eigenmannia troscheli* (Kaup).

Habitat: Amazons from Manaos to Peru.

GYMNOTUS Linnæus.[1]

Giton Kaup.

Type: *Gymnotus carapo* Linnæus.

Range that of the single species.

A1. *Gymnotus carapo* Linnæus.

Gymnotus fasciatus Pallas; *Gymnotus albus* Pallas; *Gymnotus brachyurus* Bloch; *Gymnotus putaol* Lacépède; *Carapus brachyurus* Cuvier; *Carapus inæquilabiatus* Valenciennes.

Habitat: Rio Motagua south to Rio de La Plata and San Francisco.

2. *Gymnotus carapo panthcrinus* (Steindachner), ...St., 1908*d*,

Habitat: Santos.

STERNOPYGUS Müller & Troschel.

Type: *Sternopygus macrurus* (Bloch & Schneider).

Range: Paraguay and Rio San Francisco to Magdalena and Guayaquil.

A1. *Sternopygus macrurus* Bloch & Schneider.

Carapus arenatus Eydoux Souleyet; *Carapus sanguinolentus* Castelnau; *Sternopygus marcgravii* Reinhardt; *Gymnotus carapus* Günther and other recent authors *non* Linnæus.

Habitat: Orinoco, south to Paraguay and Rio das Velhas.

2. **Sternopygus æquilabiatus** (Humboldt).

Habitat: Magdalena and Guayaquil.

A3. *Sternopygus obtusirostris* Steindachner.

Habitat: Amazons and Rio Puty.

4. *Sternopygus æquilabiatus nigriceps* von Ihering, ...v. I., 1907.

Habitat: State of Maraubam.

Family ELECTROPHORIDÆ.

ELECTROPHORUS Gill.

Type: *Gymnotus electricus* Linnæus.

Range that of the single species.

A1. *Electrophorus electricus* (Linnæus), Günther, VIII, 10.

Habitat: Brazil and northward.

Order SYNBRANCHIA.

Family SYNBRANCHIDÆ.

SYNBRANCHUS Bloch.

Unibranchapterura Lacépède; *Ophisternon* McClelland; *Tetrabranchus* Bleeker.

Type: *Synbranchus marmoratus* Bloch.

Range: Tropical America and Indies.

A1. **Synbranchus marmoratus** Bloch, Meek, 89.

Synbranchus immaculatus Bloch; *S.*

[1] In a recent paper (The Gymnotidæ, Proc. Wash. Acad. Sci., VII, p. 174) I followed Gill in using the name *Gymnotus* for the current *Gymnotus carapo* Linnæus, this species being the only one described by Linnæus in his tenth edition. No doubt seems to have been entertained about the nature of the *Gymnotus carapo* of Linnæus and its supposed synonymy and bibliography were given in the paper quoted above, p. 175.

Mr. Lönnberg has kindly called my attention to his paper (Bihang till K. Svenska Vet.-Akad. Handb., XXII, Afd. IV, 23, 1896) on Linnean Type-specimens in which he has shown that the type of Linnæus is not the current *Gymnotus carapo*, but the *Gymnotus fasciatus* of Pallas or *Giton fasciatus* Auct. The latter species must therefore stand as *Gymnotus carapo* Linnæus, the name *Gymnotus* replacing the more recent *Giton*.

The current *Gymnotus carapus* must be known by its oldest name, which is *macrurus* Bloch & Schneider. Müller & Troschel in 1849 proposed the name *Sternopygus* for *macrurus, tumifrons, virescens, lineatus,* and *æquilabiatus*. In 1894 I selected as the type of *Sternopygus* the then current *carapo*, of which *macrurus* was a synonym. The fact that the name *carapo* of Linnæus did not refer to the species under consideration need not invalidate this restriction, since there was no doubt whatever about the fish that was intended to serve as type. It may stand as *Sternopygus macrurus* (Bloch & Schneider).

transversalis Bloch & Schneider; *Unibranchapterura grisea* and *lineata* Lacépède; *Synbranchus fuliginosus* Ranzani; *Muræna lumbricus* Gronow; *Synbranchus vittatus* Castelnau; *Synbranchus hieronymi, döringii* and *tigrinus* Weyenberg.

Habitat: Cuba; Vera Cruz to La Plata and Peru; both sides of Guatemala and Panama.

Order APODES.

Family ANGUILLIDÆ.

ANGUILLA Shaw.

Type: *Anguilla anguilla* (Linnæus).

Range: North temperate to tropical waters.

1. *Anguilla chrysypa* Rafinesque,[1] J. & E., 348.

Habitat: Cuba and Central America and northward.

Order ISOSPONDYLI.

Family ENGRAULIDÆ.

STOLEPHORUS Lacépède.

Type: *Atherina japonica* Houttuyn.

Range: Marine, entering rivers. A marine genus with many species on both coasts; some of them entering rivers.[2]

1. **Stolephorus poeyi** (Kner & Steindachner), ...J. & E., 445.

Habitat: Rio Bayano, near Panama, and Ribeira?

A2. *Stolephorus clupeoides* (Swainson), J. & E., 447.
Stolephorus surinamensis Bleeker.

Habitat: Surinam; Rio Capin; Bahia; Rio Grande do Sul.

A3. *Stolephorus spinifer* Cuvier & Valenciennes, ...J. & E., 448.

Habitat: Guianas; Bahia; Panama.

A4. *Stolephorus nattereri* (Steindachner), 1879*b*, 57.

Habitat: Para.

5. *Stolephorus olidus* Günther, ...1880.

Habitat: La Plata; Parana.

6. *Stolephorus manjuba* Ribeiro, Ribeiro, 1908.

Habitat: Santa Catharina.

7. *Stolephorus brevirostris* (Günther), G., VII., 392.

Habitat: Province of Bahia.

8. *Stolephorus vaillanti* (Steindachner), Steind., 1908*g*, 193.

Habitat: Rio San Francisco.

ANCHOVIA Jordan & Evermann.

Type: *Engraulis macrolepidotus* Kner & Steindachner.

Range: Marine.

1. **Anchovia macrolepidota** (Kner & Steindachner), ...J. & E., 449.

Habitat: Gulf of California to Panama, entering rivers.

PTERENGRAULIS Günther.

Type: *Clupea atherinoides* Linnæus.

Range: Marine.

A1. *Pterengraulis atherinoides* (Linnæus), J. & E., 451.

Habitat: Coasts of Guiana and Brazil, entering rivers.

Stolephorus peruanus Steindachner. Ichthyol. Beitr., VIII, 60.
Habitat: Callao, Peru.

Stolephorus tapirulus Cope. 1877, 45.
Habitat: Coast of Peru.

[1] For the synonymy see J. & E., 348.

[2] *Stolephorus januarius* Steindachner. Ichthyol. Beitr., VIII, 58.
Habitat: Rio de Janeiro Bay.

LYCENGRAULIS Günther.

Type: *Engraulis grossidens* Cuvier.
Range: Marine.

A1. *Lycengraulis grossidens* (Cuvier), J. & E., 451.
Engraulis janeiro Agassiz; *Engraulis dentex* Cuvier & Valenciennes.
Habitat: Coast of Guiana to Rio de Janeiro, entering rivers.

A2. *Lycengraulis batesii* Günther, G. VII., 309.
Habitat: Rio Para.

CETENGRAULIS Günther.

Type: *Cetengraulis edentulus* Günther.
Range: Chiefly marine; one record for fresh water.

A1. *Cetengraulis juruensis* Boulenger, 1898, 425.
Habitat: Rio Jurua.

Family CLUPEIDÆ.[1]

CLUPEA Linnæus.

Rogenia Cuvier & Valenciennes.
Type: *Clupea harengus* Linnæus.
Range: Marine.

A1. *Clupea amazonica* Steindachner, St., 1878, 65.
Habitat: Para.

ILISHA Gray.[2]

Platygaster Swainson; *Pellona* Cuvier & Valenciennes.
Type: *Ilisha abnormis* Gray.
Range: Marine.

A1. *Ilisha flavipinnis* (Valenciennes), J. & E., 435.
Pellona orbigniana and *castelnæana* Cuvier & Valenciennes.
Habitat: Coast of Surinam to La Plata, entering rivers.

A2. *Ilisha altamazonica* (Cope), 1872, 256.
Habitat: Ambyiacu to the Tocantins.

PRISTIGASTER Cuvier.

Type: *Pristigaster cayanus* Cuvier.
Range: Marine, entering rivers.

A1. *Pristigaster cayanus* Cuvier, J. & E., 438.
Pristigaster martii Agassiz; *Pristigaster phaëton* Cuvier & Valenciennes.
Habitat: Coast of Guiana and northern Brazil, entering rivers; Rio Jurua.

2. **Pristigaster effulgens** Regan, Regan, 1903.
Habitat: Rio Vagueria, northwest Ecuador.

Family DOROSOMIDÆ.

DOROSOMA Rafinesque.

Type: *Dorosoma notatum* Rafinesque.
Range: Lake Peten through the Mississippi valley.

1. *Dorosoma anale* Meek,[3] ....Meek, 1893.
Habitat: Atlantic streams of Mexico, south of Vera Cruz.

2. *Dorosoma petenense* Günther, Günther, VII., 408.
Habitat: Lake Peten.

3. *Dorosoma chavesi* Meek, M., 1907, 112.
Habitat: Nicaragua.

SIGNALOSA Evermann & Kendal.

Type: *Signalosa atchafalayæ* Evermann & Kendal.
Range that of the single species.

1. *Signalosa mexicana* (Günther), VII., 409.

[1] *Pomolobus melanostomus* Eigenmann, La Plata.

[2] *I. bahiensis* Steindachner, Bay of Bahia; *I. panamensis* Steindachner, Panama and Guayaquil; *I. fürthi* Steindachner, Punta Arenas, Panama.

[3] *Dorosoma exile*, Atlantic streams north of Vera Cruz.

Signalosa atchafalayæ Evermann & Kendal.
Habitat: Louisiana to Central America, in lowland streams emptying into Gulf of Mexico.

Family ELOPIDÆ.

TARPON Jordan & Evermann.

Type: *Megalops atlanticus* Cuvier & Valenciennes.
Range: Marine.

1. *Tarpon atlanticus* (Cuvier & Valenciennes), ...J. & E., 409.
Megalops elongatus Girard; *Megalops thrissoides* Günther.
Habitat: Long Island to Brazil, entering rivers.

Family OSTEOGLOSSIDÆ.

OSTEOGLOSSUM Vandelli.

Ischnosoma Spix; *Scleropages* Günther.
Type: *Osteoglossum bicirrhosum* Vandelli.
Range: Tropical America; Australia and the East Indian Archipelago.

A1. *Osteoglossum bicirrhosum* Vandelli, Günther, VII., 378.
Osteoglossum vandellii Cuvier; *O. arowana* Schomburgk; *O. minus* Valenciennes.
Habitat: Guianas to Para and Huallaga.

Family ARAPAIMIDÆ.

ARAPAIMA Müller.

Sudis Cuvier; *Vastres* Cuvier & Valenciennes.
Type: *Sudis gigas* Cuvier.
Range that of the single species.

A1. *Arapaima gigas* (Cuvier), G. VII, 379.
Sudis pirarucu Spix; *Vastres cuvieri, mapæ, agassizii, arapaima* Cuvier & Valenciennes.
Habitat: Guiana to Bahia and the Peruvian Amazon.

Order HAPLOMI,

Family PŒCILIIDÆ.[1]

CYNODONTICHTHYS Meek.

Type: *Cynodontichthys tenuis* Meek.
Range that of the single species.

1. **Cynodontichthys tenuis** Meek, Meek, 107.
Habitat: Oaxaca, Mexico.

FUNDULUS Lacépède.[2]

Type: *Fundulus mudfish* Lacépède.
Hydrargira Lacépède.
Range: Central America, south to Paraguay and Peru and north to Cape Cod and California. In fresh and salt water.

1. **Fundulus punctatus** Günther, Meek, 103.
F. guatemalensis Günther; *F. oaxacæ* Meek.
Habitat: Lakes Dueñas, Amatitlan; Rio Guacalate; western Ecuador; Mexico.

2 **Fundulus extensus** Jordan & Gilbert, J. & E., 646.
Habitat: Lower California.

[1] I am unable to locate *Rhodeoides vaillanti* Thominot, Bull. Soc. Philom. (7), VIII, 150 (Magdalena River, Bolivia).

[2] *Fundulus vinctus* Jordan & Gilbert, ...Meek, 105.
Habitat: Southern portion of Lower California.

3. **Fundulus pachycephalus** Günther, J. & E., 660.
   Habitat: Lake Atitlan.
4. *Fundulus labialis* Günther, . . Meek, 107.
   Habitat: Rio San Geronimo; Lake Yzabal, Guatemala.
5. *Fundulus cubensis* Eigenmann, Eigenm., 1903, 222.
   Habitat: Rio del Pinar, Cuba.
6. *Fundulus paraguayensis* Eigenmann & Kennedy, ... E. & K., 1903, 530.
   Habitat: Arroyo Trementina, Paraguay.
7. *Fundulus balzanii* (Perugia), P., 1891, 653.
   Habitat: Villa Maria, Paraguay.

Aplocheilus McClellan.

Type: *Aplocheilus chrysostigmus* McClellan.
Range: Tropical America; boundaries not well defined.

1. **Aplocheilus peruanus** Regan, Regan, 1903, 626.
   Habitat: Perim, Peru; 800 meters.
2. *Aplocheilus dovii* Günther, J. & E., 650.
   Habitat: Punta Arenas, Costa Rica.
3. *Aplocheilus harti* Boulenger, Regan, 1906*c*, 389.
   Habitat: Trinidad.

Zoogoneticus Meek.

Type: *Platypœcilus cuitzenoensis* Bean.
Range: Principally in Mexican plateau, south to Lake Atitlan.

1. **Zoogoneticus cuitzenoensis** (Bean), Meek, 110.
   Habitat: Rio Lerma Basin.
2. **Zoogoneticus dugesii** (Bean), Meek, 111.
   Habitat: Rio Lerma Basin.
3. **Zoogoneticus pachycephalus** (Günther), ... Meek, 112.
   Habitat: Lake Atitlan.
4. **Zoogoneticus robustus** (Bean), Meek, 112.
   Z. maculatus Regan.
   Habitat: Rio Lerma Basin.
5. **Zoogoneticus diazi** Meek, . . Meek, 114.
   Habitat: Rio Lerma Basin.
6. **Zoogoneticus miniatus** Meek,[1] Meek, 115.
   Habitat: Valley of Mexico.

Rivulus Poey.

Type: *Rivulus cylindraceus* Poey.
Range: United States to Paraguay.

A1. *Rivulus brasiliensis* (Valenciennes), Günther, VI, 317.
   Rivulus urophthalmus Günther; *Rivulus poeyi* Steindachner.
   Habitat: Para; Gurupa; Cayenne.
A2. *Rivulus micropus* (Steindachner).
   Habitat: Rio Negro to Pebas; Venezuela; Trinidad.
3. *Rivulus ocellatus* Hensel, ... 1868, 365.
   Habitat: Rio Janeiro.
4. *Rivulus elegans* Steindachner, 1880, 33.
   Habitat: Cauca.
5. *Rivulus punctatus* Boulenger, . . . 1895, 3.
   Habitat: Colonia Risso.
6. **Rivulus isthmensis** Garman, J. & E., 2830.
   Habitat: Rio San Jose; Costa Rica.

A7. *Rivulus ornatus* Garman, Garman, 139.
   Habitat: Amazons.
A8. *Rivulus obscurus* Garman, Garman, 140.
   Habitat: Lake Hyanuary.
A9. *Rivulus atratus* Garman, Garman, 140.
   Habitat: Jutahy.
10. *Rivulus flabellicauda* Regan, Regan, 1907, 64.
   Habitat: Juan Veñas, Costa Rica.
11. *Rivulus godmanni* Regan, Regan, 1907, 65.
   Habitat: Guatemala.

[1] = *diazi* fide Regan.

12. *Rivulus tenuis* Meek, Meek, 1904, 101.
Habitat: El Hule in Oaxaca.
13. *Rivulus breviceps* Eigenmann, Eigenm., 1909, 49.
Habitat: Shrimp Creek, near Kaieteur.
14. *Rivulus holmiæ* Eigenmann, Eigenm., 1909, 50.
Habitat: Upper Potaro.
15. *Rivulus waimacui* Eigenmann, Eigenm., 1909, 50.
Habitat: Shrimp Creek, near Kaieteur.
16. *Rivulus stagnatus* Eigenmann, Eigenm., 1909, 50.
Habitat: Lower Potaro.
17. *Rivulus lanceolatus* Eigenmann, Eigenm., 1909, 51.
Habitat: Rockstone, British Guiana.
18. *Rivulus frenatus* Eigenmann, Eigenm., 1909, 51.
Habitat: Gluck Island, British Guiana.

PTEROLEBIAS Garman.

Type: *Pterolebias longipinnis* Garman.
Range that of the single species.

A1. *Pterolebias longipinnis* Garman, Garman, 142.
Habitat: Santarem.

CYNOLEBIAS Steindachner.[1]

Type: *Cynolebias porosus* Steindachner.
Range: La Plata to Pernambuco.

1. *Cynolebias bellottii* Steindachner, Steindachner, 1881, 9.
Habitat: La Plata.
2. *Cynolebias maculatus* Steindachner, Steindachner, 1881, 10.
Habitat: La Plata.
3. *Cynolebias elongatus* Steindachner, Steindachner, 1881, 11.
Habitat: La Plata.
4. *Cynolebias robustus* Günther, Günther, 1883.
Habitat: San Antonio; Buenos Aires.
5. *Cynolebias porosus* Steindachner, Steindachner, 1876, 124.
Habitat: Pernambuco.

GIRARDINICHTHYS Bleeker.

Limnurgus Günther.
Type: *Girardinichthys innominatus* Bleeker.
Range that of the single species.

1. **Girardinichthys innominatus** Bleeker, Meek, 116.
Limnurgus variegatus Günther; *Characodon geddesi* Regan.
Habitat: Valley of Mexico.

ILYODON Eigenmann.

Type: *Ilyodon paraguayensis* Eigenmann.
Range that of the single species.

1. *Ilyodon paraguayensis* Eigenmann, 1907a, 428.

CHARACODON Günther.

Type: *Characodon lateralis* Günther.
Range: Mexico and Central America.

1. **Characodon multiradiatus** Meek, Meek, 119.
Habitat: Rio Lerma Basin.
2. **Characodon eiseni** Rutter,[2] . Meek, 119.
Habitat: Lowland streams of Jalisco and Tepic.
3. **Characodon variatus** Bean, . Meek, 120.
Characodon ferrugineus Bean.
Habitat: Rio Lerma Basin.
4. **Characodon lateralis** Günther, Meek, 121.
Habitat: Central America, north to Jalisco.
5. **Characodon garmani** Jordan & Evermann,[3] . . . . . Meek, 121.
Habitat: Headwaters of Rios Mezquital and Nazas.

[1] Garman considers *elongatus* a synonym of *porosus* and *robustus* a synonym of *maculatus*.

[2] = *variatus* fide Regan.

[3] = *lateralis* fide Regan.

6. **Characodon furcidens** Jordan & Gilbert, Meek, 122.
   Habitat: Southern Lower California and lowland streams of Jalisco and Colima.

CHAPALICHTHYS Meek.

Type: *Characodon encaustus* Jordan & Snyder.
Range that of the single species.

1. **Chapalichthys encaustus** (Jordan & Snyder), ...Meek, 123.
   Habitat: Basin of the Rio Lerma.

CYPRINODON Lacépède.

Prinodon Rafinesque.
Type: *Cyprinodon variegatus* Lacépède..
Range: Central America north to Rio Colorado and Cape Cod, south to the Amazon.

1. **Cyprinodon bovinus** Baird & Girard, Meek, 126.
   C. *eximius* Girard; *C. latifasciatus* Garman; *C. elegans* Meek.
   Habitat: Rio Nasas and headwaters of the Rio Mezquital.

A2. *Cyprinodon amazonus* Eigenmann, Eigenm., 1894, 627.
   Habitat: Lower Amazon.

3. *Cyprinodon martæ* Steindachner, Steind., 1876, 28.
   Habitat: Near mouth of the Rio Magdalena.

4. *Cyprinodon variegatus* Lacépède, J. & E., 672.
   Esox ovinus Mitchill; *Lebias rhomboidalis* Val., *Lebias ellipsoidea* Le Sueur; *Cyprinodon gibbosus* B. & G.; *Trifarcins riverendi* Poey.

5. *Cyprinodon dearborni* Meek, Meek, 1909, 208.
   Habitat: Curaçoa, Dutch W. I.

PSEUDOXIPHOPHORUS Bleeker.[1]

Pœcilioides Steindachner.
Type: *Xiphophorus bimaculatus* Heckel.
Range: Eastern slope of Mexico.

1. *Pseudoxiphophorus bimaculatus* (Heckel), ...Meek, 127.
   P. reticulatus Trosch.; *P. b. tæniatus* Regan.
   Habitat: Eastern slopes of Mexico from Jalapa to Guatemala, up to an altitude of 600 feet.

2. *Pseudoxiphophorus jonesi* Günther, Regan, 1907*a*, 260.
   P. bimaculatus J. & E., *non* Heck.; *P. pauciradiatus* Regan.
   Habitat: Orizaba.

PETALOSOMA Regan.

Type: *Petalosoma cultratum* Regan.
Range that of the single species.

1. *Petalosoma cultratum* Regan, Regan, 1909*d*, 458.
   Habitat: Costa Rica.

GAMBUSIA Poey.

Type: *Gambusia punctata* Poey.
Range: Mexico north to the Southern States.

1. *Gambusia punctata* Poey, J. & E., 679.
   Habitat: Fresh waters of Cuba.

2. *Gambusia puncticulata* Poey, J. & E., 680.
   Habitat: Fresh waters of Cuba.

3. *Gambusia annectens* Regan, Regan, 1907*a*, 259.
   Habitat: Carrullo and Juan Veñas, Costa Rica.

4. *Gambusia episcopi* Steindachner, J. & E., 683.
   Habitat: Ditches at Obispo, Panama.

[1] This genus should according to Regan be merged with *Gambusia*.

5. **Gambusia fasciata** Meek, ..Meek, 129.
Habitat: Pacific slope of the Isthmus of Tehuantepec.
6. **Gambusia gracilis** (Heckel), Meek, 130.
Habitat: Both slopes south of the City of Mexico.
7. *Gambusia affinis* (Baird & Girard), Meek, 130.
Heterandria nobilis Baird & Girard; *Gambusia speciosa, gracilis* and *senilis* Girard.
Habitat: Rio Panuco; Rio Conchos and northward.
8. *Gambusia tridentiger* Garman, J. & E., 2833.
Habitat: Fresh waters of the Isthmus of Panama.
9. **Gambusia infans** Woolman, Meek, 131.
Habitat: Rio Lerma Basin.
10. *Gambusia bonita* Meek, ...Meek, 132.
Habitat: Rio Papaloapam.
11. **Gambusia terrabensis** Regan, Regan, 1907*a*, 260.
Habitat: Rio Grande de Terraba, Pacific slope of Costa Rica.
12. *Gambusia rhabdophora* Regan, Regan, 1908*d*.
Habitat: Costa Rica.

PARAGAMBUSIA Meek.

Type: *Gambusia nicaraguensis* Günther.
Range that of the single species.
1. *Paragambusia nicaraguensis* (Günther), Meek, 133.
Habitat: Southern Mexico and Lake Nicaragua.

BELONESOX Kner.

Type: *Belonesox belizanus* Kner.
Range that of the single species.
1. *Belonesox belizanus* Kner, ..Meek, 135.
Habitat: Southern Mexico; Lake Peten; Honduras; Guatemala.

ANABLEPS Bloch.

Type: *Anableps tetrophthalmus* Bloch.
Range: Isthmus of Tehuantepec to the Amazons.
1. **Anableps dowei** Gill, ...Meek, 136.
Habitat: Rio Tehuantepec to Panama.
A2. *Anableps anableps* (Linnæus), Günther, VI, 337.
Anableps tetrophthalmus Bloch; *A. surinamensis* Lacépède; *A. gronovii* Cuvier & Valenciennes; *A. lineatus* Gronow.
Habitat: Guianas; Orinoco; Amazons.
A3. *Anableps microlepis* Garman, Garman, 78.
Anableps coactatus and *elongatus* Cuvier & Valenciennes.
Habitat: Para to Guiana.

FITZROYA Günther.

Jenynsia Günther.
Type: *Labias multidentatus* Jenyns.
Range: La Plata to Rio Grande do Sul.
1. *Fitzroya lineata* (Jenyns), Garman, 69.
Lebias multidentatus Jenyns; *Pœcilia punctata* Valenciennes; *Xiphophorus obscurus minor* and *heckelii* Weyenberg.
Habitat: La Plata and Rio Grande do Sul.
2. *Fitzroya pyrogramma* Boulenger, Boul., 1902, 336.
Habitat: Argentine Republic.

GLARIDICHTHYS Garman.

Glaridodon Garman.
Type: *Glaridodon latidens* Garman.
Range: Cuba and northern Mexico.
1. *Glaridichthys latidens* (Garman), Meek, 134.
Habitat: Chihuahua.
2. *Glaridichthys uninotatus* Poey, J. & E., 687.

Habitat: Fresh waters of Cuba.

3. *Glaridichthys falcatus* Eigenmann, Eigenm., 1903, 224.
Habitat: Fresh waters of Cuba.

4. *Glaridichthys torralbasi* Eigenmann, Eigenm., 1903, 225.
Habitat: Fresh waters of Cuba.

TOXUS Eigenmann.

Type: *Toxus riddlei* Eigenmann.
Range that of the single species.

1. *Toxus riddlei* Eigenmann, Eigenm., 1903, 226.
Habitat: San Cristobal, Cuba.

GIRARDINUS Poey.

Type: *Girardinus metallicus* Poey.
Range: Cuba to Rio Grande do Sul.

1. *Girardinus metallicus* Poey, J. & E., 687.
Habitat: Fresh waters of Cuba.

2. *Girardinus denticulatus* Garman, Garman, 47.
Habitat: Remedios, Cuba.

3. *Girardinus creolus* Garman, Garman, 47.
Habitat: Cuba.

4. *Girardinus garmani* Eigenmann, Eigenm., 1903, 226.
Habitat: Pinar del Rio, Cuba.

5. *Girardinus caucanus* Steindachner, Steind., 1880.
Habitat: Cauca.

PHALLOPTYCUS Eigenmann.

Type: *Girardinus januarius* Hensel.
Range that of the single species.

1. *Phalloptychus januarius* (Hensel), E., 1907*a*, 430.
Girardinus iheringii Boulenger; *? Gambusia gracilis* Perugia.
Habitat: Rio de Janeiro to Rio Grande do Sul.

PHALLOCEROS Eigenmann.

Type: *Girardinus caudomaculatus* Hensel.
Range that of the single species.

1. *Phalloceros caudomaculatus* (Hensel), E., 1907*a*, 431.
Habitat: Rio Negro to Rio de Janeiro and Paraguay.

ACANTHOPHACELUS Eigenmann,

Type: *Pœcilia reticulata* Peters.
Range: Leeward Islands, northern South America.

1. *Acanthophacelus guppii* (Günther), G., VI, 353.
Habitat: Trinidad; Venezuela.

2. *Acanthophacelus reticulatus* (Peters), J. & E., 2833.
Pœcilia vandepolli[1] and *orubensis* Van Lidth de Jende.
Habitat: Leeward Islands; Guiana.

3. *Acanthophacelus melanzonus* Eigenmann, Eigenm., 1909, 51.
Habitat: Georgetown Trenches.

4. *Acanthophacelus bifurcus* Eigenmann, Eigenm., 1909, 52.
Habitat: Creeks near Wismar, British Guiana.

CNESTERODON Garman.

Type: *Pœcilia decemmaculata* Jenyns.
Range: Amazons to Maldonado.

1. *Cnesterodon decemmaculatus* (Jenyns), Garman, 44.
Habitat: Rio Grande do Sul to Maldonado.

A2. *Cnesterodon scalprideus* Garman, Garman, 45.
Habitat: Amazons.

GOODEA Jordan.

Type: *Goodea atripinnis* Jordan.
Xenendum Jordan & Snyder.
Range: Rio Lerma Basin and headwaters of the streams approaching it.

1. **Goodea whitei** Meek, ...Meek, 137.

[1] Meek, 1909, 209, considers this a *Girardinus*.

Habitat: Upper Balsas Basin.

2. *Goodea toweri* Meek, ...Meek, 138.
   Habitat: Upper Panuco Basin.
3. **Goodea luitpoldi** (Steindachner),[1] Meek, 139.
   Xenendum xaliscone Jordan & Snyder.
   Habitat: Rio Lerma Basin.
4. **Goodea atripinnis** Jordan, ..Meek, 140.
   Xenendum caliente Jordan & Snyder.
   Habitat: Lerma and Panuco Basins.
5. **Goodea calientis** Jordan & Snyder, Meek, 148.
   Goodea atripinnis Meek.
   Habitat: Lerma and upper tributaries of Rio Panuco.

SKIFFIA Meek.

Type: *Skiffia lermæ* Meek.

Range: Lerma Basin.

1. **Skiffia multipunctata** (Pellegrin), Meek, 141.
   Habitat: Rio Lerma Basin.
2. **Skiffia lermæ** Meek, ...Meek, 142.
   Habitat: Rio Lerma Basin.
3. **Skiffia variegata** Meek, ...Meek, 143.
   Habitat: Rio Lerma Basin.
4. **Skiffia bilineata** (Bean), ..Meek, 144.
   Habitat: Rio Lerma Basin.

PLATYPŒCILUS Günther.[2]

Type: *Platypœcilus maculatus* Günther.

Range: Mexico, south to Panama.

1. *Platypœcilus maculatus* Günther, Meek, 145.
   Habitat: Atlantic lowland streams south of Vera Cruz.
2. *Platypœcilus tropicus* Meek, Meek, 1907*a*, 146.
   Habitat: Costa Rica at Turrialba.
3. *Platypœcilus spilonotus* Regan,[*] Regan, 1909, 460.
   Habitat: San José.
4. *Platypœcilus nelsoni* Meek, ..Meek, 147.
   Habitat: Papayo; Guerrero.

HETERANDRIA Agassiz.

Type: *Limia formosa* Girard.

Range: Cuba and Mexico to Amazon.

1. **Heterandria pleurospilus** (Günther), Meek, 148.
   Habitat: Pacific slope of southern Mexico and Central America; Lake of Dueñas.
2. **Heterandria lutzi** Meek, ...Meek, 148.
   Habitat: Atlantic and Pacific slopes of southern Mexico.
3. **Heterandria presidionis** Jordan & Culver, ...Meek, 152.
   Habitat: Presidio.
4. *Heterandria cubensis* Eigenmann, E., 1903, 227.
   Habitat: Fresh waters of western Cuba.

A5. *Heterandria minor* Garman, Garman, 92.
   Habitat: Villa Bella.

PŒCILIA Bloch & Schneider.

Type: *Pœcilia vivipara* Bloch & Schneider.

Range: West Indies and Mexico to Ecuador and Montevideo.

1. *Pœcilia vittata* Guichenot, ..J. & E., 692.
   Limia cubensis Poey.
   Habitat: Cuba.
2. *Pœcilia latipunctata* Meek,[3] ..Meek, 150.
   Habitat: Basin of the Rio Panuco.
3. **Pœcilia butleri** Jordan, ...Meek, 151.
   Habitat: Fresh and brackish water from Mazatlan to Tehuantepec.
4. **Pœcilia sphenops** Cuvier & Valenciennes, ...Meek, 153.
   Molienesia fasciata Müller & Troschel; *Gambusia modesta* and *plumbea*

[1] = *atripinnis* fide Regan.

[2] *Platypœcilus mentalis* Gill may be found in fresh water at Panama. Proc. Acad. Nat. Sci. Phila, 1876, 335.

[3] = *sphenops* fide Regan.

Troschel; *Pœcilia mexicana* Steindachner; *Pœcilia limantouri* Jordan & Snyder; *P. chisoyensis dovii gillii* Günther.

Habitat: Atlantic slope from Monterey, Mexico, to Costa Rica; Pacific slope from the Rio Balsas, Mexico, to Lake Amatitlan, Guatemala.

5. *Pœcilia vivipara* Bloch & Schneider, J. & E., 691.

Pœcilia surinamensis and *unimaculata* Valenciennes; *Pœcilia schneideri* Cuvier & Valenciennes.

Habitat: Martinique; Guianas; Rio Grande do Sul and Paraguay.

A6. *Pœcilia vivipara parœ* Eigenmann, Eigenm., 1894, 628.

Habitat: Rio das Mogubas; Para.

7. *Pœcilia gillii* (Kner & Steindachner),[1] J. & E., 692.

Habitat: Rio Chagres.

8. **Pœcilia thermalis** Steindachner,[1] J. & E., 693.

Habitat: Warm springs of San Salvador, Mexico.

9. *Pœcilia petenensis* Günther, J. & E., 694.

Habitat: Lake Peten.

10. *Pœcilia boucardi* Steindachner,[1] J. & E., 695.

Habitat: Atlantic slope of the isthmus of Panama.

11. *Pœcilia dominicensis* Cuvier & Valenciennes, ...J. & E., 696.

Habitat: San Domingo and the Barbadoes.

12. *Pœcilia melanogaster* Günther, J. & E., 696.

Habitat: ? Jamaica.

13. *Pœcilia spilurus* Günther, J. & E., 697.

Habitat: Central America.

14. *Pœcilia elongata* Günther, J. & E., 697.

Habitat: Streams about Panama.

15. *Pœcilia punctata* Cuvier & Valenciennes, Günther, VI, 65.

Habitat: Montevideo.

[1] = *sphenops* fide Regan.

16. *Pœcilia salvatoris* Regan, 1907–8, 104. *P. thermalis* Regan (*non* Steind.).

Habitat: Salvador.

17. **Pœcilia festæ** Boulenger, ...1898, 13.

Habitat: Hot springs, San Vicenta; Santa Elena, Ecuador.

A18. *Pœcilia branneri* Eigenmann, 1894, 629.

Habitat: Santarem; Para.

A19. *Pœcilia amazonica* Garman, Garman, 64.

Habitat: Santa Cruz; Para.

20. *Pœcilia amates* Miller, Miller, 1907, 108.

Habitat: Basin of Rio Motagua.

21. *Pœcilia tenuis* Meek, Meek, 1907*a*, 147.

Habitat: Costa Rica.

22. *Pœcilia caudata* Meek, Meek, 1909, 209.

Habitat: Costa Rica.

23. *Pœcilia retropinna* Regan, Regan, 1908*d*, 458.

Habitat: Costa Rica.

A24. *Pœcilia heteristia* Regan, Regan, 1909, 235.

Mollienesia Le Sueur.

Type: *Mollienesia latipinna* Le Sueur.

Range: South Carolina to Lake Peten.

1. *Mollienesia latipinna* Le Sueur, Meek, 155.

Pœcilia multilineata Le Sueur; *P. lineolata, Limia pœcilioides, formosa* and *matamorensis* Girard.

Habitat: Lowland streams from Yucatan to South Carolina.

2. *Mollienesia jonesi* Günther, J. & E., 689.

Habitat: Lake Alcohuaca and Huamantla, Mexico.

3. *Mollienesia petenensis* Günther, J. & E., 700.

Habitat: Lake Peten.

Xiphophorus Heckel.

Type: *Xiphophorus helleri* Heckel.

Range: Atlantic slope of Mexico and Guatemala.

1. *Xiphophorus helleri* Heckel, J. & E., 701.
   Habitat: Atlantic slope of Mexico and Guatemala.
2. *Xiphophorus guentheri* Jordan & Evermann, ...J. & E., 702.
   Habitat: Rio Chisoy.
3. *Xiphophorus jalapæ* Meek,[1] .Meek, 156.
   Habitat: Central Vera Cruz.
4. *Xiphophorus montezumæ* Jordan & Snyder, ...Meek, 158.
   Habitat: Rio Panuco Basin.
5. *Xiphophorus strigatus* Regan, Regan, 1907, 65.
   X. helleri Meek (*non* Heckel).
   Habitat: Southern Mexico, Vera Cruz and Oaxaca.
6. *Xiphophorus brevis* Regan, Regan, 1907–8, 108.
   Habitat: Stann Creek, British Honduras.

ORESTIAS Valenciennes.

Orestiasini, Orestiasiformes Bleeker.
Type: *Orestias cuvieri* Valenciennes.
Range: Titicaca Basin; headwaters of Urubamba; Rio Rimac.

1. *Orestias cuvieri* Valenciennes, Garman, 147.
   Orestias humboldti Valenciennes; *O. pentlandi* Castelnau, *non* Valenciennes.
   Habitat: Lake Titicaca.
2. *Orestias pentlandi* Valenciennes, Garman, 148.
   Orestias bairdii Cope.
   Habitat: Lake Titicaca; Cuzco Valley.
3. *Orestias elegans* Garman, Garman, 149.
   Habitat: Small lakes in headwaters of Rio Rimac, 4,200 meters.
4. *Orestias mülleri* Valenciennes, Garman, 149.
   Orestias luteus Günther, (*non* Val.).
   Habitat: Lake Titicaca.
5. *Orestias agassizi* Valenciennes, Garman, 150.
   Orestias tschudii Castelnau; *O. owenii* Günther, in part; *O. ortoni* and *frontosus* Cope.
   Habitat: Lake Titicaca.
6. *Orestias owenii* Valenciennes, Garman, 152.
   Habitat: Lake Titicaca.
7. *Orestias albus* Valenciennes.
   Orestias mülleri Günther, in part.
   Habitat: Lake Titicaca.
8. *Orestias neveni* Pellegrin, .P., 1907, 24.
   Habitat: Lake Titicaca.
9. *Orestias olivaceus* Garman, Garman, 152.
   Habitat: Land-locked lake Umayo, nine miles northwest of Lake Titicaca and 100 feet higher.
10. *Orestias luteus* Valenciennes, Garman, 154
    Orestias mülleri Günther, in part.
    Habitat: Lake Titicaca.
11. *Orestias jussiei* Valenciennes, Garman, 155.
    Orestias jussieui Castelnau.
    Habitat: Titicaca and Guasacona River; Lake Chinchoro near Cuzco.
12. *Orestias incæ* Garman, ..Garman, 155.
    Habitat: Lake Titicaca.
13. *Orestias tirapatæ* Boulenger, Boulenger, 1902, 153.
    Habitat: Andes of Eastern Peru.

TOMEURUS Eigenmann.

Type: *Tomeurus gracilis* Eigenmann.
Range that of the single species.

1. *Tomeurus gracilis* Eigenmann.
   Habitat: Wismar and Aruka River, British Guiana.

[1] According to Regan this is *helleri*.

Family GALAXIIDÆ.[1]

GALAXIAS Cuvier.

Mesites Jenyns.

Type: *Galaxias truttaceus* Cuvier.

1. **Galaxias attenuatus** (Jenyns).
   Mesites gracillimus Canestrini; *Galaxias minutus* Philippi; ? *G. punctatus* Philippi.
   Habitat: Southern Patagonia, Tierra del Fuego and Falkland Islands.
2. **Galaxias maculatus** (Jenyns).
   Galaxias coppingeri Günther; *Mesites attenuatus* Jenyns.
   Habitat: Puerto Montt, south to the Falkland Islands and St. Augustine.
3. **Galaxias platei** Steindachner.
   ? Galaxias grandis Philippi; *G. delfini* Philippi.
   Habitat: Southern Patagonia.
4. *Galaxias alpinus* (Jenyns).
   Habitat: Alpine lakes of Hardy Peninsula, Tierra del Fuego.
5. *Galaxias smittii* Regan.
   Habitat: Falkland Islands.
6. *Galaxias titcombi* Evermann & Kendall.
   Habitat: Rio Traful, Argentina.
7. **Galaxias bullocki** Regan, Regan, 1908*b*.
   Habitat: Southern Chili.

Family APLOCHITONIDÆ.

APLOCHITON Jenyns.

Farionella Cuvier & Valenciennes.

Haplochiton Günther.

Type: *Aplochiton zebra* Jenyns.

1. **Aplochiton zebra** Jenyns.
   Farionella gayii Cuvier & Valenciennes.
   Habitat: Puerto Montt and south to the Falkland Islands.
2. *Aplochiton tæniatus* Jenyns.
   Habitat: Southern Patagonia and Tierra del Fuego.

Order SYNENTOGNATHI.

Family BELONIDÆ.

TYLOSURUS Cocco.

Type: *Tylosurus cantraini* Cocco = *T. acus* Lacépède.

Range: Marine, entering rivers.

1. *Tylosurus microps* (Günther), J. & E., 712.
   Habitat: Guiana.

A2. *Tylosurus amazonicus* (Steindachner), J. & E., 712.
   Habitat: Para; Manacapuru; Tajapuru.

A3. *Tylosurus almeida* (Quoy & Gaimard), J. & E., 715.
   Belone timucu Cuvier & Valenciennes; *B. truncata* and *guianensis* Günther, *non* Müller & Troschel.
   Habitat: Surinam to Rio de Janeiro.

4. *Tylosurus marinus* (Walbaum), J. & E., 714.
   Esox longirostris Mitchill; *Belone truncata* Le Sueur; *B. scrutator* Girard.
   Habitat: Cape Cod to Yucatan, entering rivers.
5. **Tylosurus fluviatilis** Regan, Regan, 1903, 626.
   Habitat: Rivers of northwestern Ecuador.
6. *Tylosurus scapularis* Jordan & Gilbert, J. & E., 711.
   Habitat: Panama.

[1] For a detailed account of the Galaxiidæ see Section 1 of this report.

ATHLENNES Jordan & Fordice.

Type: *Belone hians* Cuvier & Valenciennes.

Range: Marine.

A1. *Athlennes hians* (Cuvier & Valenciennes), ...J. & E., 718.

Belone maculata Poey.

Habitat: West Indies to Bahia, entering rivers.

POTAMORRHAPHIS Günther.

Type: *Belone tæniata* Günther = *guianensis* Schomburgk.

Range that of the single species.

A1. *Potamorrhaphis guianensis* (Schomburgk),.....Günther, VI, 256.

Belone scolopacina Cuvier & Valenciennes; *Belone tæniata* Günther.

Habitat: Guiana to Paraguay.

Order ACANTHOPTERÆ.

Family MUGILIDÆ.

Subfamily MUGILINÆ.

MUGIL Linnæus.

Type: *Mugil cephalus* Linnæus.

Range: Marine. In many seas.

1. **Mugil curema** Cuvier & Valenciennes, J. & E., 813.

Mugil petrosus C. & V.; *M. brasiliensis* Jordan & Gilbert.

Habitat: Both coasts, entering rivers.

2. *Mugil platanus* Günther, Günther, '80, 9.

Habitat: Rio de La Plata.

A3. *Mugil xinguensis* Steindachner, St., 1907*d*, 489.

Habitat: Xingu.

Several species of Mugil are found along the coasts of South America and most of them may be found entering fresh water.

Subfamily AGONOSTOMINÆ.

AGONOSTOMUS Bennett.

Type: *Agonostomus telfairii* Bennett.

Range: Fresh waters of the West Indies; Central America; New Zealand; Australia; Celebes, etc.

(DAJAUS Cuvier & Valenciennes.)

(Type: *Dajaus monticola* Cuvier & Valenciennes).

1. *Agonostomus percoides* Günther, J. & E., 819.

Habitat: Fresh waters of Santo Domingo; Trinidad.

2. **Agonostomus monticola** Bancroft, J. & E., 819.

Habitat: West Indies to Trinidad; Atlantic and Pacific slope of Mexico and Central America.

3. **Agonostomus microps** Günther, J. & E., 820.

Habitat: Rio Guacalate.

4. *Agonostomus macracanthus* Regan, Regan, 1907, 65.

Habitat: Rio Guacalate, Guatemala.

5. *Agonostomus salvini* Regan, Regan, 1907, 66.

Habitat: Rio Nacasil, Guatemala.

6. **Agonostomus nasutus** Günther, G., III, 463.

N. digueti Vaill.

Habitat: Mountain torrents of Lower California to Costa Rica.

XENORHYNCHICHTHYS Regan.

Type: *Joturus stipes* Jordan & Gilbert.

Range that of the single species.

1. *Xenorhynchichthys stipes* (Jordan & Gilbert).
   Habitat: Central America.

JOTURUS Poey.

Type: *Joturus pichardi* Poey.

1. *Joturus pichardi* Poey, ...J. & E., 821.
   Agonostoma globiceps Günther.
   Habitat: Cuba, in mountain streams.

Family ATHERINIDÆ.[1]

PROTISTIUS Cope.

Type: *Protistius semotilus* Cope.
Range that of the single species.

1. **Protistius semotilus** Cope, ..1874, 66.
   Habitat: Peruvian Andes. Elevation 12,000 feet.

GASTROPTERUS Cope.

Pisciregia Abbott.
Type: *Gastropterus archæus* Cope.
Range: Ocean to 7,500 feet.

1. **Gastropterus archæus** Cope, Cope, 1878, 700.
   Habitat: Arequipa, Pacific slope of Peru. Altitude 7,500 feet and ocean?
2. **Gastropterus beardsleei** Abbott.
   Habitat: Coast of Peru.

ATHERINA Linnæus.

Membras Bonaparte.
Type: *Atherina hepsetus* Linnæus.
Range: Marine. Fresh waters of Cuba.

1. *Atherina evermanni* Eigenmann, Eigenm., 1903.
   Habitat: Western Cuba.

CHIROSTOMA Swainson.

Atherinoides, Atherinichthys Bleeker; *Heterognathus* Girard.
Type: *Atherina humboldtiana* Cuvier & Valenciennes.
Range: Mexico.

(ESLOPSARUM Jordan & Evermann.)

(Type: *Chirostoma jordani* Woolman.)

1. **Chirostoma jordani** Woolman, Meek, 169.
   Chirostoma brasiliense Jordan; *Atherinichthys brevis* Steindachner.
   Habitat: Rio Lerma and the valley of Mexico.
2. **Chirostoma breve** Steindachner, St., 1895, 526.
   Habitat: Rio Lerma; valley of Mexico.
3. **Chirostoma mezquital** Meek,[2] Meek, 170.
   Habitat: Durango.
4. **Chirostoma arge** Jordan & Synder, Meek, 171.
   Habitat: Rio Lerma Basin.
5. **Chirostoma bartoni** Jordan & Evermann, ...Meek, 172.
   Habitat: Rio Lerma Basin.
6. **Chirostoma attenuatum** Meek,[3] Meek, 172.
   Habitat: Rio Lerma Basin.
7. **Chirostoma labarcæ** Meek[1], Meek, 173.
   Habitat: Rio Lerma Basin.
8. **Chirostoma patzcuaro** Meek, Meek, 174.
   Habitat: Rio Lerma Basin.
9. **Chirostoma zirahuen** Meek,[4] Meek, 174.
   Habitat: Rio Lerma Basin.

(CHIROSTOMA.)

10. **Chirostoma humboldtianum** (Cuvier & Valenciennes), ...Meek, 175.
    Atherina vomerina C. & V.

[1] *Atherinichthys argentinensis* C. & V., La Plata; *Odontesthes perugiæ* Evermann & Kendall, Argentina.

[2] = *jordani* fide Regan.

[3] = *bartoni* fide Regan.

[4] = *bartoni* fide Regan.

Habitat: Rio Lerma and valley of Mexico.

11. **Chirostoma chapalæ** Jordan & Snyder, Meek, 176.
Habitat: Rio Lerma Basin.

12. **Chirostoma grandoculis** Steindachner, Meek, 176.
Habitat: Rio Lerma Basin.

13. **Chirostoma promelas** Jordan & Snyder, ...Meek, 177.
Habitat: Rio Lerma Basin.

(LETHESTOLE Jordan & Evermann.)
(Type: *Chirostoma estor* Jordan.)

14. **Chirostoma diazi** Jordan & Snyder, J. & S., 1899, 137.
Chirostoma sphyræna Meek, *non* Boulenger.
Habitat: Rio Lerma Basin.

15. **Chirostoma sphyræna** Boulenger, Meek, 177.
C. lermæ J. & S.
Habitat: Rio Lerma Basin.

16. **Chirostoma lucius** Boulenger, Meek, 178.
Chirostoma crystallinum Jordan & Snyder.
Habitat: Rio Lerma Basin.

17. **Chirostoma ocotlane** Jordan & Snyder, Meek, 180.
Chirostoma lucius Boulenger, part.
Habitat: Rio Lerma Basin.

18. **Chirostoma estor** Jordan, ..Meek, 180.
Atherinichthys albus Steindachner.
Habitat: Rio Lerma and valley of Mexico.

MENIDIA Bonaparte.

Type: *Atherina menidia* Linnæus.
Range: Marine. Many species in the Atlantic and Pacific of North and Central America.

1. *Menidia sallei* (Regan), ...Meek, 181.
Habitat: Mexico.

2. **Menidia guatemalensis** (Günther), J. & E., 801.
Habitat: Lakes of Guàtemala.

3. **Menidia laticlava** (Cuvier & Valenciennes).
Habitat: Chili and Patagonia.

4. **Menidia mauleana** (Steindachner),
Habitat: Pichi Lagune, a branch of Lake Llanquihue.

5. *Menidia hatcheri* Eigenmann.
Habitat: Lake Pueyrredon.

THYRINA Jordan & Culver.

Melaniris Meek.
Type: *Thyrina evermanni* Jordan & Culver.
Range: Pacific slope of Mexico.

1. **Thyrina guatemalensis** (Günther), Regan, 1907–8, 64.
Th. evermanni and *crystallina* Jordan & Culver; *Melaniris balsanus* Meek.
Habitat: Rio Presidio; Sinaloa.

2. *Thyrina meeki* Miller, ...M., 1907, 110.
Habitat: Rio Montagua Basin, Guatemala.

3. *Thyrina sardina* Meek, Meek, 1907, 114.
Habitat: Lakes of Nicaragua.

XENATHERINA Regan.

Type: *Menidia lisa* Meek.
Range that of the single species.

1. *Xenatherina lisa* (Meek), Regan, 1907–8, 64.

ATHERINOPSIS Girard.

Basilichthys Girard.
Type: *Atherinopsis californiensis* Girard.
Range: California to Patagonia.

1. *Atherinopsis regius* (Humboldt).
Atherina microlepidota Jenyns.
Habitat: Callao to Gallegos and ? Montevideo, entering fresh waters.

2. *Atherinopsis bonariensis* (Cuvier & Valenciennes), Evermann & Kendall, 1906, 95.
Habitat: Lakes of Argentina.

Family POLYCENTRIDÆ.

POLYCENTRUS Müller & Troschel.

Type: *Polycentrus schomburgkii* Müller & Troschel.
Range: Guiana and Trinidad.

1. *Polycentrus schomburgkii* Müller & Troschel, ...Günther, III, 370.
Habitat: Essequibo; Orinoco; Trinidad.
2. *Polycentrus tricolor* Gill, Günther, III,370.
Habitat:Trinidad.

MONOCIRRHUS Heckel.

Type: *Monocirrhus polyacanthus* Heckel.
Range that of the single species.

A1. *Monocirrhus polyacanthus* Heckel, Günther, III, 371.
Habitat: Rio Cupai and ponds near the Rio Negro.

Family CENTROPOMIDÆ.

CENTROPOMUS Lacépède.

Oxylabrax Bleeker; *Macrocephalus* Brown.
Type: *Sciæna undecimalis* Bloch.
Range: Marine. Some, possibly all, of the species entering or living in fresh water.

A1. **Centropomus medius** Günther, J. & E., 1119.
C. grandoculatus E. & J.; *C. pedimacula* part J. & E.
Habitat: Atlantic and Pacific coasts, entering rivers.

A2. **Centropomus parallelus** Poey, J. & E., 1122.
C. gabbi and *heringi* Fowler; *C. mexicanus* Bocourt.
Habitat: Cuba to Bahia; Pacific coast, entering rivers.

3. **Centropomus undecimalis** (Bloch), J. & E., 1118.
C. undecimradiatus, boubina and *aureoviridis* Lacépède; *C. argenteus* Regan; *C. appendiculatus* Poey.
Habitat: Atlantic coast, entering rivers.

A4. *Centropomus pectinatus* Poey, J. & E., 1122.
C. pedimacula Poey.
Habitat: Cuba to Pernambuco, entering rivers.

5. **Centropomus nigrescens** Günther, Regan, 50.
Habitat: Rio Presidio to Panama.

6. **Centropomus robalito** Jordan & Gilbert, J. & E., 1123.
C. armatus Günther, *non* Gill.
Habitat: Pacific coast from Mazatlan to Panama, entering rivers.

7. **Centropomus armatus** Gill, Regan, 1903, 627.
C. atridorsalis Regan; *C. brevis* Günther.
Habitat: Rio Vaqueria near La Tola, northwestern Ecuador.

8. *Centropomus ensiferus* Poey, Regan, 1906*c*, 391.
C. affinis Steind.; *C. scaber* Bocourt.
Habitat: Guiana.

Family SERRANIDÆ.[1]

PERCICHTHYS Girard.

Type: *Perca trucha* Cuvier & Valenciennes.

Range: Valparaiso to the Rio Negro.

1. **Percichthys trucha** (Cuvier & Valenciennes).

   Perca lævis Jenyns; *Percichthys chilensis* Girard.

   Habitat: South of Santiago and the Rio Negro of Patagonia.

2. **Percichthys melanops** Girard.

   Perca pocha Philippi.

   Habitat: Santiago to Curico, Chili.

3. *Percichthys altipinnis* Regan.

   Habitat: Rio Colorado, Buenos Aires.

4. *Percichthys vinciguerœ* Perugia.

   Habitat: Rio Santa Cruz.

PERCILIA Girard.

Type: *Percilia gillissii* Girard.

Range that of the single species.

1. **Percilia gillisii** Girard.

   Habitat: Central Chili.

Family HÆMULIDÆ.

POMADASIS Lacépède.

Pristopoma Oken; *Rhencus* and *Rhoniscus* Jordan & Evermann.

Type: *Pomadasis argenteus* Lacépède.

Range: Marine. Tropical seas, entering rivers.

1. *Pomadasis boucardi* Steindachner, Regan, 1907–8, 43.

   P. templei Meek.

   Habitat: Rio Panuco, east coast.

2. **Pomadasis bayanus** Jordan & Evermann, ...J. & E., 1331.

   Pristipoma humile Kner & Steindachner, *non* Bowditch; *Pristipoma labiaciforme* Boulenger.

   Habitat: Rio Bayano, near Panama.

3. **Pomadasis andrei** (Sauvage), J. & E., 1332.

   Habitat: Rio Guayas, near Guayaquil.

A4. *Pomadasis crocro* (Cuvier & Valenciennes), ...J. & E., 1333.

   Pristipoma cultriferum Poey; *Pomadasys approximans* Bean & Dressel; *P. starri* Meek.

   Habitat: West Indies; São Matheos; Itabapuana; Cannavierias.

5. *Pomadasis grandis* Meek, Meek, 1907, 116.

   Habitat: Lake Nicaragua.

6. **Pomadasis branicki** (Steindachner), J. & E., 1333.

   Habitat: Mazatlan to Peru, entering rivers.

7. **Pomadasis macracanthus** Günther, Regan, 1907–8, 42.

   Habitat: Rio Presidio to Panama.

8. **Pomadasis leuciscus** Günther, Regan, 1907–8, 42.

   Habitat: California to Peru.

Family SCIÆNIDÆ.

APLODINOTUS Rafinesque.

Type: *Aplodinotus grunniens* Rafinesque.

1. *Aplodinotus grunniens* Rafinesque.

   Habitat: Chiapas, Mexico, northward through the Mississippi valley.

PLAGIOSCION Gill.

Diplolepis Steindachner.

Type: *Sciæna squamosissima* Heckel.

Range: Rivers of the eastern slope of South America from the Magdalena to the La Plata.

[1] For details see the Patagonian section of this report.

A1. *Plagioscion squamosissimus* (Heckel), J. & E., 1418.
Sciæna rubella Schomburgk; *Johnius crouvina* and *amazonicus* Castelnau; *Corvina monacantha* Cope.
Habitat: Brazil and Guiana.

2. *Plagioscion heterolepis* (Bleeker), J. & E., 1419.
Habitat: Surinam.

3. *Plagioscion ternetzi* Boulenger, Boulenger, 1896, 25.
Habitat: Paraguay Basin.

A4. *Plagioscion surinamensis* (Bleeker), J. & E., 1419.
Sciæna magdalenæ Steindachner.
Habitat: Rio Magdalena to Para.

A5. *Plagioscion auratus* Castelnau, Günther, II, 281.
Habitat: Rivers of Brazil.

PACHYURUS Agassiz.

Lepipterus Cuvier & Valenciennes.
Type: *Pachyurus squamipinnis* Agassiz.
Range: Amazons; Paraguay; Rio San Francisco.

A1. *Pachyurus squamipinnis* Agassiz, Jordan & Eigenmann, 1889, 69.
Pachyurus lundii Reinhardt.
Habitat: Rio San Francisco and tributaries; Para.

2. *Pachyurus francisci* (Cuvier & Valenciennes), Jordan & Eigenmann, 1889, 412.
Pachyurus corvina Reinhardt.
Habitat: Rio San Francisco and tributaries.

3. *Pachyurus bonariensis* Steindachner, Jordan & Eigenmann, 1889, 412.
Sciæna adusta Hensel.
Habitat: La Plata Basin; Rio Grande do Sul.

A4. *Pachyurus schomburgki* Günther, Jordan & Eigenmann, 1889, 412.
Pachyurus nattereri Steindachner.
Habitat: Amazons and tributaries; Paraguay.

PACHYPOPS Gill.

Type: *Micropogon trifilis* Müller & Troschel.
Range: Guiana to the Guaporé and southeastern Brazil.

A1. *Pachypops furcræus* (Lacépède), Jordan & Eigenmann, 1889, 413.
Corvina biloba Cuvier & Valenciennes.
Habitat: Rivers of Brazil and Guiana.

A2. *Pachypops trifilis* (Müller & Troschel), Jordan & Eigenmann, 1889, 413.
Habitat: Rio Guaporé to Guiana.

3. *Pachypops adspersus* (Steindachner), Jordan & Eigenmann, 1889, 414.
Corvina grunniens Schomburgk.
Habitat: Southeastern Brazil.

Family PERCIDÆ.

ETHEOSTOMA Rafinesque.

Type: *Etheostoma flabellare* Rafinesque.
Range: Rio Mezquital north through Atlantic slope of America.

(RAFINESQUIELLUS Jordan & Evermann.)
(Type: *Aplesion pottsii* Girard.)

1. **Etheostoma pottsii** (Girard), Meek, 197.
Etheostoma micropterus Gilbert.
Habitat: Headwaters of Rio Mezquital (Pacific slope), and Rio Conchos and Rio Nazas (Atlantic slope).

Family CICHLIDÆ.[1]

CHÆTOBRANCHUS Heckel.

Type: *Chætobranchus flavescens* Heckel.

Range: Guiana to the Guaporé.

A1. *Chætobranchus flavescens* Heckel, Pellegrin, 164.

Chætobranchus brunneus Heckel; *Chromys ucayalensis* Castelnau; *Chætobranchus robustus* Günther; *Geophagus badiipinnis* Cope.

Habitat: Amazons, north to Guiana and south to the Guaporé.

A2. *Chætobranchus semifasciatus* Steindachner, ...Pellegrin, 165.

Habitat: Amazons.

CHÆTOBRANCHOPSIS Steindachner.

Type: *Chætobranchopsis orbicularis* Steindachner.

Range: Amazon and Paraguay.

A1. *Chætobranchopsis orbicularis* Steindachner, ...Pellegrin, 165.

Habitat: Amazons.

2. *Chætobranchopsis australis* Eigenmann & Ward, ...E., 1907*c*, 144.

Habitat: Paraguay.

CICHLA Bloch & Schneider.

Type: *Cichla ocellaris* Bloch & Schneider.

Range: Guianas to Argentina; not in southeast Brazil.

A1. *Cichla ocellaris* Bloch & Schneider, Pellegrin, 148.

Cichla monoculus Agassiz; *C. atabapensis* Humboldt; *? C. orinocensis* Humboldt; *C. argus* Valenciennes; *Cychla nigro-maculata* and *trifasciata* Schomburgk; *Acharnes speciosus* Müller & Troschel; *Cichla toucounarai* and *? multifasciata* Castelnau; *Crenicichla orinocensis* Günther.

Habitat: Amazons and northward.

A2. *Cichla temensis* Humboldt, Pellegrin, 149.

Cichla tucunare Heckel; *Cychla flavomaculata* Schomburgk; *? Cichla conibos* Castelnau.

Habitat: Orinoco; Amazons.

3. *Cichla niederleinii* (Holmberg), Holmberg, 1891, 181.

Habitat: Rio Pequiri, Misiones, Argentina.

4. *Cichla chacoensis* (Holmberg), Holmb., 1891, 182.

Habitat: Formosa, Chaco, Argentina; Rio Paraguay and tributaries.

UARU Heckel.

Type: *Uaru amphiacanthoides* Heckel.

Range: Guiana and Amazon.

A1. *Uaru amphiacanthoides* Heckel, Pellegrin, 212.

Pomotis fasciatus Schomburgk; *Uaru obscurum* Günther.

Habitat: Amazons; ? Guiana.

A2. *Uaru imperialis* (Steindachner), Pellegrin, 213.

Habitat: Amazon near the Rio Negro.

HEROTILAPIA Pellegrin.

Type: *Heros multispinosus* Günther.

Range that of the single species.

1. *Herotilapia multispinosa* (Günther), Pellegrin, 211.

Habitat: Lake Managua.

PARANEETROPLUS Regan.

Type: *Paraneetroplus bulleri* Regan.

Range that of the single species.

1. *Paraneetroplus bulleri* Regan, R., 1905, 436.

Habitat: Rio de Sarabia, Mexico.

NEETROPLUS Günther.

Type: *Nectroplus nematopus* Günther.

Range: Eastern slope of Mexico and Central America.

[1] For the details of this family see Pellegrin, 1904, and various papers by Regan, 1904 and 1905.

1. *Neetroplus nematopus* Günther, Pellegrin, 209.
   Neetroplus nicaraguensis Gill and Bransford.
   Habitat: Lakes Managua and Nicaragua.

ACAROPSIS Steindachner.

Type: *Acara nassa* Heckel.
Range that of the single species.

A1. *Acaropsis nassa* (Heckel), Pellegrin, 144.
   Habitat: Guiana; Orinoco and Amazons.

PETENIA Günther.

Type: *Petenia splendida* Günther.
Range that of the single species.

1. *Petenia splendida* Günther, Pellegrin, 207.
   Habitat: Lake Peten.

TOMOCICHLA Regan.

Type: *Tomocichla underwoodi* Regan.
Range that of the single species.

1. *Tomocichla underwoodi* Regan, Regan, 1908*d*, 463.
   Habitat: Costa Rica.

HERICHTHYS Baird & Girard.

Type: *Herichthys cyanoguttatus* Baird & Girard.
Range: Texas to Guatemala.

1. *Herichthys cyanoguttatus* Baird & Girard, ...J. & E., 1537.
   Neetroplus carpintis Jordan & Snyder; *Heros temporatus* Fowler.
   Habitat: Texas to northeastern Mexico.

2. *Herichthys bocourti* Vaill. & Pell., Pellegrin, 1903, 246.
   Habitat: Guatemala.

3. *Herichthys geddesi* Regan, Regan, 1905, 436.
   Habitat: Southern Mexico.

ASTRONOTUS Swainson.

Acara Heckel restricted by Gill to *crassispinis* = *ocellatus*.
Type: *Lobotes ocellatus* Agassiz.
Range: Guiana to Peru and Paraguay.

A1. *Astronotus ocellatus* (Agassiz), Pellegrin, 146.
   Acara crassispinis Heckel; *Cychla rubro-ocellata* Schomburgk; *Acara compressus* and *? hypostictus* Cope.
   Habitat: Guiana, Amazons and Paraguay.

A2. *Astronotus ocellatus zebra* Pellegrin, Pellegrin, 147.
   Habitat: Santarem.

A3. *Astronotus hypostictus* Cope, Pellegrin, 146.
   Habitat: Marañon.

NANNACARA Regan.

Type: *Nannacara anomala* Regan.
Range that of the single species.

1. *Nannacara anomala* Regan, Regan, 1905, 344.
   Habitat: Essequibo.

ÆQUIDENS Eigenmann & Bray.[1,2]

Type: *Acara tetramerus* Heckel.
Range: Panama to the La Plata and western Ecuador.

[1] *? A. filamentosus* (Lacépède) and *A. planifrons* (Kaup).

[2] In 1839 Swainson (Nat. Hist. Fishes, Amph. and Rept., II) defined the genera *Astronotus* (p. 229) and *Cichlasoma* (p. 230). The types and only species of the genera are *Lobotes ocellatus* Agassiz and *Sciæna punctata* Linnæus.

In 1840 Heckel defined his new genus *Acara*. It included the type of Swainson's *Astronotus* under the new name *crassispinis* and also that of *Cichlasoma*. He did not indicate a type, and he grouped the species as follows, describing the first thirteen in detail.

A.

Acara margarita = *Cichlasoma bimaculatum*.
Acara tetramerus = *Æquidens tetramerus*

A1. *Æquidens tetramerus* (Heckel), Pellegrin, 135.

? Sciæna punctata Linnæus; *Acara viridis, diadema, pallidus* and *dimerus* Heckel; *Chromys punctata* and *unicellata* Castelnau.

Habitat: Essequibo; Amazons south to Rio Janeiro and Paraguay.

B.

Acara viridis	=	*Æquidens tetramerus.*
Acara diadema	=	*Æquidens tetramerus.*
Acara vittatus	=	*Æquidens vittatus.*

C.

Acara pallidus	=	*Æquidens tetramerus.*
Acara dorsigerus	=	*Æquidens dorsigerus.*
Acara marginatus	=	*Cichlasoma bimaculatum.*
Acara dimerus	=	*Æquidens tetramerus.*

D.

Acara nassa	=	*Acaropsis nassa.*
Acara cognatus	=	*Acaropsis nassa.*
Acara unicolor	=	*Acaropsis nassa.*

E.

Acara crassispinis	=	*Astronotus ocellatus.*

Heckel enumerates as other species belonging to this genus:

Acara niloticus	=	*Tilapia nilotica.*
Acara punctatus	=	*Cichlasoma punctatum.*
Acara gronovii	=	*Cichlasoma bimaculatum.*
Acara brasiliensis	=	*Geophagus brasiliensis.*
Acara tænia	=	*Cichlasoma bimaculatum.*
Acara surinamensis	=	*Geophagus surinamensis.*
Acara desfontainii	=	*Astatotilapia desfontainii.*
Acara ocellatus	=	*Astronotus ocellatus.*

Inasmuch as the species described by Heckel included members of four distinct genera and since he added members of three other genera from species known to him from descriptions, we cannot say that he had any very definite thing in mind when he framed the genus.

In the generic description he refers to figures of the lower pharyngeals and gill-arches of *Acara tetramerus* and *crassispinis.*

As far as Heckel's work is concerned, his *Acara,* containing the type of Swainson's *Astronotus* (to the figure of which Heckel definitely refers in his generic description) might be a synonym of *Astronotus* or separate from it, depending altogether on which of his species, if any, he considered his type. If any presumption is permitted, it must be in favor of his first species or the last, or one of the species whose figures are referred to in his generic description. The first species is a synonym of *Sciæna bimaculata* Linnæus and belongs to the genus *Cichlasoma* of Swainson. If the first species is selected, the name *Acara* becomes a synonym of *Cichlasoma.* If the last species, *crassispinis,* is selected, *Acara* becomes a synonym of *Astronotus,* since *crassispinis* is a synonym of *ocellatus,* the type of the latter genus. If one of the two species figured is selected we may have *tetramerus* or again *crassispinis* as the type for *Acara.* If the former is selected the name *Acara* will stand.

Inasmuch as Heckel does not select a type, it is incumbent on a later naturalist to select a type from among the four species discussed, or from among any of Heckel's species.

In the earliest paper by Gill (Synopsis of the Fresh-Water Fishes of Trinidad) he says, p. 19: "As it [*Labrus punctatus,* the type of *Cichlasoma*] is a true *Acara,* the latter genus is consequently synonymous with *Cychlasoma,* and in accordance with the law of priority, the Swainsonian name must be adopted as that of the present genus." Gill re-defines the genus *Cichlasoma,* excluding several of Heckel's species, and continues: "With these characters, that species which Mr. Heckel . . . has described as the *Acara crassispinis,* will also be excluded [from the genus *Cichlasoma*]; this species appears to be generically distinct from both *Cychlasoma* and from *Astronotus* of Swainson. . . . If it should be found, on a more critical examination, to be really distinct from *Astronotus,* to which it is most nearly allied, Heckel's name of *Acara* might appropriately be retained as its generic name. . . . It belongs to the section E of the genus *Acara,* in the arrangement of Heckel . . .; the other sections . . . all belong to *Cychlasoma* as now restricted."

Gill thus removed from *Acara* all of Heckel's species but *crassispinis.*

There can be no question that it was entirely within the province of Gill to restrict the genus to this species. But it was found later that *crassispinis* is a synonym of *ocellatus,* the type of *Astronotus. Acara* is therefore the exact synonym of *Astronotus* and cannot be used for anything else. Inasmuch as *tetramerus* and other species are distinct from *Astronotus,* I coined the name *Æquidens* for them in 1894. (Ann. N. Y. Acad. Sci., VII, 616, using the *Acara tetramerus* Heckel as type.)

The name *Acara* has been resurrected by Regan (Ann. and Mag. Nat. Hist. (7), XV, 1905, p. 330), who says: "After removing from Heckel's genus the species which belong to *Astronotus, Cichlasoma* and *Acaropsis,* I use *Acara* for the remainder, regarding Gill's restriction of the name *Acara* to a species which was already the type of another genus as invalid."

I know of no rule, ancient or modern, of scientific nomenclature which authorizes anyone to regard as invalid the work done by someone else, unless that work was done contrary to the accepted canons. In fact, the rules (if I am not mistaken) have been made especially to prevent this sort of procedure.

2. *Æquidens centralis* (Holmberg), Pellegrin, 136.
   Habitat: Santiago del Estero, Argentina.
3. *Æquidens portalegrensis* (Hensel), Pellegrin, 137.
   Habitat: Porto Alegre, Rio Grande do Sul; Paraguay.

A4. *Æquidens vittatus* (Heckel), Pellegrin, 137.
   Habitat: Colombia to Guiana; Amazons and Paraguay.

A5. *Æquidens syspilus* (Cope), Pellegrin, 137.
   Habitat: Upper Amazons.

A6. *Æquidens dorsigerus* (Heckel), Pellegrin, 138.
   Habitat: Paraguay; Amazons.

7. *Æquidens paraguayensis* Eigenmann & Kennedy, ...Pellegrin, 139.
   Habitat: Paraguay.

A8. *Æquidens flavescens* (Cope), Regan, 1905, 343.
   Habitat: Ambyiacu.

A9. *Æquidens thayeri* (Steindachner), Pellegrin, 139.
   Habitat: Amazons (Lago Maximo; Hyanuary; Teffé).

10. *Æquidens pulcher* (Gill), Pellegrin, 140.
   Habitat: Rio Magdalena to Trinidad.

11. Æquidens cœruleopunctatus (Kner & Steindachner).
   Acara latifrons Steindachner.
   Habitat: Rio Chagres; northwestern Ecuador.

12. *Æquidens latifrons* (Steindachner), Pellegrin, 141.
   Habitat: Rio Magdalena.

13. Æquidens equinoctialis (Regan), Regan, 1905, 337.
   Habitat: Western Ecuador.

14. Æquidens rivulatus (Günther), Pellegrin, 141.
   Acara pulchra Günther, *non* Gill.
   Habitat: Western Ecuador.

15. *Æquidens sapayensis* Regan.
   Habitat: Western Ecuador.

16. *Æquidens freniferus* (Cope), Pellegrin, 141.
   Habitat: Ambyiacu.

A17. *Æquidens minutus* (Hensel),[1] Pellegrin, 142.
   Habitat: Porto Alegre, Rio Grande do Sul.

18. *Æquidens geayi* (Pellegrin), Pellegrin, 142.
   Habitat: River Camopi, French Guiana.

A19. *Æquidens subocularis* (Cope), Pellegrin, 189.
   Geophagus (*mesops*) *thayeri* Steindachner.
   Habitat: Amazons.

20. *Æquidens maronii* (Steindachner), Pellegrin, 143.
   Habitat: French Guiana.

A21. *Æquidens zamorensis* (Regan), Regan, 1905, 339.
   Habitat: Ecuadorian Amazons.

Thorichthys Meek.

Type: *Thorichthys ellioti* Meek.

Range: Eastern slope of Mexico and Central America.

1. *Thorichthys aureus* (Günther), Pellegrin, 202.
   Heros maculipinnis and *helleri* Steindachner.
   Habitat: Eastern Mexico, south of Vera Cruz; Guatemala.

2. *Thorichthys ellioti* Meek, ...Meek, 223.
   Habitat: Vera Cruz, Mexico.

3. *Thorichthys callolepis* Regan, Regan, 1904, 258.
   Habitat: Santo Domingo de Guzman.

4. *Thorichthys affinis* (Günther).
   Habitat: Guatemala and British Hon-

[1] Regan considers this the young of *Geophagus gymnogenys* Hensel.

duras; Lake Peten; Belize; Lake Floris.

CICHLASOMA Swainson.[2]

Type: *Sciæna bimaculata* Linnæus.

Range: Mexico to La Plata; on both slopes of Central America. Chiefly in middle America, few in South America.

(1. *Cichlasoma* Swainson.)

A1. *Cichlasoma bimaculatum* (Linnæus), Regan, 68.

Labrus punctatus Linnæus, part; *Chromis tænia* Bennet; *Acara gronovii, margarita* and *marginatus* Heckel.

Habitat: Paraguay to Trinidad; Amazon.

(2. *Mesonauta* Günther.)

(Type: *Heros festivus* Heckel.)

2. *Cichlasoma festivum* (Heckel), Regan, 69.

Heros insignis Heckel; *Chromys acora* Castelnau.

Habitat: Paraguay to Orinoco.

(3. ————.)

3. *Cichlasoma facetum* (Jenyns), Pellegrin, 181.

Heros jenynsii Steindachner; *Heros acaroides* Hensel.

Habitat: La Plata Basin.

4. *Cichlasoma autochthon* (Günther), Pellegrin, 199.

La Plata Basin; southeastern Brazil.

A5. *Cichlasoma oblongum* (Castelnau), Pellegrin, 200.

Habitat: Province Goyaz.

6. *Cichlasoma globosum* Miller, Miller, 1907, 114.

Habitat: Motagua Basin.

7. *Cichlasoma mañana* Miller, Miller, 1907, 115.

Habitat: Motagua Basin.

8. *Cichlasoma acutum* Miller, Miller, 1907, 117.

Habitat: Motagua Basin.

9. *Cichlasoma milleri* Meek, Meek, 1907*a*, 142.

Habitat: Motagua Basin.

(4. ————.)

A10. *Cichlasoma temporale* (Günther), Pellegrin, 182.

Acara crassa Steindachner; *Heros gœldii* Boulenger.

Habitat: Amazons; Guiana.

A11. *Cichlasoma coryphœnoides* (Heckel), Pellegrin, 183.

Heros niger Heckel.

Habitat: Amazons.

12. *Cichlasoma biocellatum* Regan, Regan, 1909, 234.

Habitat: Costa Rica.

(5. *Archocentrus* Gill.)

(Type: *Heros centrarchus* Gill & Bransford.)

13. **Cichlasoma nigrofasciatum** (Günther), ...Pellegrin, 187.

Habitat: Lakes Atitlan, Amatitlan and Guatemala.

Cichlasoma octofasciatum Regan; *C. hedricki* Meek, ...Regan, 331.

Habitat: Southern Mexico to British Honduras.

14. *Cichlasoma spilurus* (Günther), Pellegrin, 186.

Habitat: Guatemala in Rio Motagua; Lake Yzabal.

15. *Cichlasoma septemfasciatum* Regan, Regan, 1908*d*, 461.

Habitat: Costa Rica.

16. *Cichlasoma spinosissimum* Vaillant & Pellegrin, ...Pellegrin, 188.

[2] I largely follow Regan (Ann. and Mag. Nat. Hist. (7), XVI, pp. 60–77, 225–243, 316–340, but retain *Thorichthys* as a distinct genus.

Habitat: Rio Polochic, Guatemala.

17. *Cichlasoma immaculatum* Pellegrin, Regan, 77.
Habitat: Rio Polochic.

18. *Cichlasoma centrarchus* (Gill & Bransford), ...Pellegrin, 188.
Habitat: Lake Nicaragua.

(6. *Theraps* Günther.)
(Type: *Theraps irregularis* Günther.)

19. *Cichlasoma zonatum* Meek, .Meek, 245.
Habitat: Niltepec, Oaxaca.

20. *Cichlasoma eigenmanni* (Meek), Regan, 225.
Habitat: Rio Papaloapam.

21. *Cichlasoma nebuliferum* (Günther), Regan, 226.
Cichlasoma teapæ Evermann & Goldsborough; *Heros gibbiceps* Steind.
Habitat: Eastern lowland streams of the Isthmus of Tehuantepec; Teapa, Mexico.

22. *Cichlasoma parma* (Günther), Regan, 227.
Cichlasoma maculicauda Regan.
Habitat: Rio Chagres; Rio Motagua; Lake Yzabal.

23. *Cichlasoma fenestratum* (Günther), Regan, 227.
Heros parma (part) Günther; *Cichlasoma melanurum* (part) Meek.
Habitat: Southern Mexico and Guatemala.

24. *Cichlasoma nigritum* Meek, M., 1907, 128.
Habitat: Nicaragua.

25. *Cichlasoma bifasciatum* (Steindachner), ...Regan, 228.
Habitat: Mexico.

26. Cichlasoma guttulatum Günther, Regan, 229.
Habitat: Lake Peten, Lake Amatitlan, Rio Chinantla; Lake Nacasil; Rio Sarabia.

27. *Cichlasoma microphthalmus* Günther, Regan, 230.
Cichlasoma güntheri Pellegrin; *C. oblongum* Günther, *non* Castelnau.
Habitat: Rio Motagua.

28. *Cichlasoma sexfasiatum* Regan, Regan, 230.
Habitat: Guapote, Mexico.

29. *Cichlasoma melanurus* (Günther), Regan, 231.
Heros melanopogon Steindachner.
Habitat: Vera Cruz to Lake Peten.

30. *Cichlasoma labridens* Pellegrin, Regan, 443.
Cichlasoma bartoni (*non* Bean) Meek (part).
Habitat: Rio Panuco and tributaries, Mexico.

31. *Cichlasoma gadovii* Regan, Regan, 232.
? C. melanurum (*non* Günther) Meek.
Habitat: Motzorongo, southern Mexico.

32. *Cichlasoma intermedium* (Günther), Regan, 232.
Acara rectangularis Steindachner.
Habitat: Yzabal and Lake Peten; Mexico.

33. *Cichlasoma anguliferum* Günther.
Habitat: Guatemala.

34. *Cichlasoma pavonaceum* Garman, Regan, 234.
Habitat: Monclova, Coahuila, Mexico.

35. *Cichlasoma sieboldii* (Kner & Steindachner), ...Regan, 235.
Habitat: Panama; Colombia.

36. *Cichlasoma deppii* (Heckel), Pellegrin, 179.
? Heros montezuma Heckel.
Habitat: Mexico, Vera Cruz.

37. Cichlasoma godmanni (Günther), Regan, 235.
Habitat: Rio Cahabon (Atlantic Slope) and west slope of Panama.

38. *Cichlasoma irregulare* (Günther), Regan, 236
Habitat: Guatemala, Atlantic slope.

39. *Cichlasoma lentiginosum* (Steindachner), ...Pellegrin, 181.
Habitat: Mexico.

(7. ————.)

40. *Cichlasoma balteatum* (Gill & Bransford), ... Regan, 238.
Habitat: Lake Nicaragua.
41. *Cichlasoma nicaraguense* (Günther), Regan, 238.
Habitat: Lake Nicaragua.
42. *Cichlasoma alfari* Meek, Meek, 1907*a*, 148.
Habitat: Costa Rica.

(8. *Astotheros* Pellegrin.)

(Type: *Heros heterodontus* Vaillant & Pellegrin.)

43. *Cichlasoma robertsoni* Regan, Regan, 239.
Habitat: Stann Creek, British Honduras.
44. *Cichlasoma longimanus* (Günther), Regan, 240.
Habitat: Lake Nicaragua.
45. **Cichlasoma macracanthus** (Günther), ...Regan, 241.
Habitat: Chiapam and Huamuchal.
46. *Cichlasoma heterodontum* Vaillant & Pellegrin, ...Regan, 241.
Habitat: Isthmus of Tehuantepec.
47. *Cichlasoma evermanni* Meek, Meek, 214.
Habitat: Tehuantepec and Niltepec, Mexico.
48. **Cichlasoma altifrons** (Kner & Steindachner), ...Regan, 242.
Habitat: Pacific rivers of Chiriqui (western Veragua).
49. *Cichlasoma lithrinus* Regan, Regan, 1908*d*, 462.
Habitat: Costa Rica.
50. *Cichlasoma rostratum* (Gill & Bransford), ...Regan, 243.
Habitat: Lake Nicaragua.

(9. *Erythrichthys* Meek.)

51. **Cichlasoma margaritiferum** (Günther), ...Regan, 316.
Habitat: Lake Peten; Rio Polochic, Le Mullin.
52. *Cichlasoma citrinellum* Günther, Regan, 316.
Heros lobochilus (part) Günther; *Heros basilaris* Gill & Bransford.
Habitat: Lake Nicaragua and Lake Managua.
53. *Cichlasoma granadense* Meek, Meek, 1907, 121.
Habitat: Nicaragua.

(10. ————.)

54. *Cichlasoma dorsatum* Meek, Meek, 1907, 123.
Habitat: Nicaragua.
55. *Cichlasoma erythræum* Günther, Regan, 318.
Habitat: Lake Managua.
56. *Cichlasoma lobochilum* Günther, Regan, 318.
Habitat: Lake Managua.
57. *Cichlasoma labiatum* Günther, Regan, 319.
Habitat: Lakes Managua and Nicaragua.

(11. *Heros* Heckel.)

(Type: As restricted by Jordan & Gilbert, *Heros severus* Heckel.)

A58. *Cichlasoma severum* (Heckel) Regan, 322.
Heros spurius, coryphæus, modestus, efasciatus Heckel; *Chromys appendiculata* and *fasciata* Castelnau; *Uarus centrarchoides* Cope.
Habitat: Amazons; Guiana; Parahyba.

(12. *Hoplarchus* Kaup.)

(Type: *Hoplarchus pentacanthus* Kaup).

A59. *Cichlasoma psittacus* Heckel, Regan, 323.
Hoplarchus pentacanthus Kaup; *Pomotis fasciatus* Schomburgk.
Habitat: Rios Negro and Orinoco.

(13. *Parapetenia* Regan.)
(Type: *Acara adspersa* Günther.)

60. *Cichlasoma adspersum* (Günther), Regan, 324.
Habitat: Barbadoes.

61. *Cichlasoma tetracanthus* (Cuvier & Valenciennes), ...Regan, 325.
Chromis fusco-maculatus Guichenot.
Habitat: Cuba.

62. *Cichlasoma torralbasi* Eigenmann, Eigenmann, 1903, 230.
Habitat: Almendares River, Cuba.

63. *Cichlasoma griseum* Eigenmann, Eigenmann, 1903, 232.
Habitat: San Antonio de las Baños, Cuba.

64. *Cichlasoma latum* Eigenmann, Eigenmann, 1903, 233.
Habitat: San Juan River, Cuba.

65. *Cichlasoma cinctum* Eigenmann, Eigenmann, 1903, 234.
Habitat: Paso Real, Cuba.

66. *Cichlasoma nigricans* Eigenmann, Eigenmann, 1903, 235.
Habitat: Pinar del Rio.

67. **Cichlasoma istlanum** Jordan & Snyder, ...Regan, 326.
Habitat: Basin of Rio Balsas.

68. *Cichlasoma steindachneri* (Jordan & Snyder), ...Regan, 444.
Habitat: Basin of the Rio Panuco, Mexico.

69. *Cichlasoma bartoni* (Bean), Regan, 327.
Habitat: Basin of the Rio Panuco, Mexico.

70. **Cichlasoma beani** Jordan, Regan 328.
Habitat: Rio Presidio, near Mazatlan; Rosario; Sinaloa (northernmost or Pacific coast?).

71. *Cichlasoma mento* Vaillant & Pellegrin, Regan, 329.
Habitat: Rio Negro, southern Mexico.

72. **Cichlasoma festæ** Boulenger, Regan, 329.
Habitat: Rio Durango; Rio Guayas, Ecuador.

73. **Cichlasoma ornatum** Regan, Regan, 331.
Habitat: Rio Durango; St. Javier, northwest Ecuador.

74. *Cichlasoma urophthalmus* Günther, Regan, 332.
Heros troscheli Steindachner.
Habitat: Yucatan; Belize; Lake Peten.

75. **Cichlasoma trimaculatum** Günther, Regan, 333.
Habitat: Chiapam and Huamuchal.

76. *Cichlasoma salvini* Günther, Regan, 334.
Heros triagramma Steindachner.
Habitat: Lakes Peten, Santa Yzabal; Rio Mullins, Guatemala; Motzorongo, Refugio, El Huele, Perez and Obispo, Mexico.

77. *Cichlasoma mojarra* Meek, ..Meek, 217.
Habitat: San Geronimo and Miltepec, Oaxaca, Mexico.

78. *Cichlasoma multifasciatum* Regan, Regan, 335.
Heros friedrichsthalii (part) Günther.
Habitat: Guatemala; British Honduras.

79. *Cichlasoma friederichsthali* (Heckel), Miller, 1906.
Heros motaguensis and *managuensis* Günther.[1]
Habitat: Nicaragua; Honduras; Lake Peten.

80. *Cichlasoma dovii* Günther, Regan, 338.
Habitat: Lake Nicaragua.

A81. *Cichlasoma spectabile* Steindachner, Regan, 339.
Habitat: Amazon.

82. *Cichlasoma krausi* Steindachner, Regan, 339.

[1] Regan considers these species distinct.

Chromis dentatus Guichenot MS.
Habitat: Maracaibo and Cauca.

83. *Cichlasoma punctatum* Meek,[1]
Meek, 1909, 210.
Habitat: Costa Rica.

84. *Cichlasoma frontale* Meek,
Meek, 1909, 210.
Habitat: Costa Rica.

CRENICARA Steindachner.

Type: *Crenicara elegans* Steindachner.
Range that of the single species.

A1. *Crenicara punctulata* (Günther),
Pellegrin, 133.
Crenicara elegans Steindachner.
Habitat: Essequibo and Amazons.

DICROSSUS Agassiz.

Type: *Dicrossus maculatus* Steindachner.
Range that of the single species.

A1. *Dicrossus maculatus* Steindachner,
Pellegrin, 134.
Habitat: Amazons.

BATRACHOPS Heckel.

Boggiania Perugia.
Type: *Batrachops reticulatus* Heckel.

1. *Batrachops ocellatus* Perugia,
Regan, 1905, 154.
Habitat: Upper Paraguay.

2. *Batrachops semifasciatus* Heckel,
Regan, 1905, 155.
Habitat: Paraguay to Montevideo.

A3. *Batrachops reticulatus* Heckel,
Regan, 1905, 155.
Crenicichla elegans Steindachner.
Habitat: Guianas to Amazon.

A4. *Batrachops punctulatus* Regan,
Regan, 1905, 156.
Habitat: Essequibo and Amazon.

A5. *Batrachops cyanotus* (Cope),
Regan, 1905, 156.
Habitat: Upper Amazon.

6. *Batrachops scottii* Eigenmann,
E., 1907*a*, 455.
Habitat: La Plata.

CRENICICHLA Heckel.

Type: *Crenicichla vittata* Heckel.
Range: Guiana to La Plata.

A1. *Crenicichla lepidota* Heckel,
Regan, 1905, 158.
Habitat: Rio Guaporé; Paraguay to Buenos Aires; Rio Grande do Sul.

A2. *Crenicichla saxatilis* (Linnæus),
Regan, 1905, 159.
Scarus rufescens Gronow; *Cichla labrina* Agassiz; *Cychla rutilans* Schomburgk; *Scarus pavoninus* Gronow; *Crenicichla frenata* Gill; *C. proteus* Cope; *C. argynnis* Cope; *C. semicincta* Steindachner; *C. albopunctata* Pellegrin; *C. vaillanti* Pellegrin.
Habitat: Trinidad to Amazons; Paraguay Basin; Rio Grande do Sul.

A3. *Crenicichla lucius* Cope,
Regan, 1905, 160.
Crenicichla anthurus Cope.
Habitat: Amazon of Ecuador.

4. *Crenicichla geayi* Pellegrin,
Regan, 1905, 161.
Habitat: Orinoco.

5. *Crenicichla lacustris* Castelnau,
Regan, 1905, 162.
Crenicichla punctata Hensel; *C. polysticta* Hensel.
Habitat: Southern and eastern Brazil, Bahia to Rio Grande do Sul.

A6. *Crenicichla macrophthalmus* Heckel,
Regan, 1905, 162.
Habitat: Rio Negro.

A7. *Crenicichla wallacii* Regan, 1905, 162.
Habitat: Rio Essequibo; Rio Negro.

A8. *Crenicichla vittata* Heckel,
Regan, 1905, 163.

[1] I am unable to give this and the next species their proper place.

Habitat: Amazon; Paraguay; Eastern Brazil.

A9. *Crenicichla acutirostris* Günther, Regan, 1905, 164.

Habitat: Rio Cupai.

10. *Crenicichla multispinosa* Pellegrin, Regan, 1905, 164.

Habitat: Surinam.

11. *Crenicichla marmorata* Pellegrin, Pellegrin, 1903, 347.

Habitat: ?

A12. *Crenicichla strigata* Pellegrin, Regan, 1905, 165.

Crenicichla johanna, var. *vittata* Günther, *non* Heckel.

Habitat: Amazon.

A13. *Crenicichla lugubris* Heckel, Regan, 1905, 165.

Crenicichla funebris Heckel.

Habitat: Brazil; Guiana; Venezuela.

14. *Crenicichla cincta* Regan, Regan, 1905, 166.

Crenicichla fasciata Pellegrin, *non* Schomburgk.

Habitat: Marajo Island, Para.

A15. *Crenicichla ornata* Regan. Regan, 1905, 167.

Crenicichla lenticulata Pellegrin, *non* Heckel.

Habitat: Amazon; Guiana.

A16. *Crenicichla lenticulata* Heckel.

Crenicichla adspersa Heckel.

Habitat: Rio Negro; Rio Guaporé.

A17. *Crenicichla johanna* Heckel.

Cychla fasciata Schomburgk; *Crenicichla obtusirostris* Günther.

Habitat: Brazil; Guiana; Venezuela.

RETROCULUS Eigenmann & Bray.

Type: *Retroculus boulengeri* Eigenmann & Bray.

Range that of the single species.

A1. *Retroculus lapidifer* (Castelnau), Regan, 1906, 50.

R. boulengeri E. & B.

Habitat: Amazon.

HETEROGRAMMA Regan.

Mesops Günther preoccupied.

Type: *Mesops tæniatus* Günther.

Range: Amazons, Rio Puty and Paraguay.

A1. *Heterogramma agassizii* (Steindachner), ...Pellegrin, 151.

Habitat: Lower Solimoens, Amazon and Rio Puty.

A2. *Heterogramma tæniatum* (Günther), Pellegrin, 151.

? Geophagus amœnus Cope.

Habitat: Amazons; Paraguay.

3. *Heterogramma corumbæ* Eigenmann & Ward.

Habitat: Paraguay.

4. *Heterogramma trifasciatum* Eigenmann & Kennedy, ...Pellegrin, 152.

Habitat: Paraguay.

5. *Heterogramma borellii* Regan, Regan, 1906, 63.

Habitat: Parahuaty.

6. *Heterogramma steindachneri* Regan, Regan, 1908*a*, 370.

Habitat: Georgetown.

7. *Heterogramma pleurotænia* Regan, Regan, 1909*a*, 270.

Habitat: La Plata.

GEOPHAGUS Heckel.

Biotodoma Eigenmann & Kennedy.

Type: *Sparus surinamensis* Bloch.

Range: Panama to La Plata.

A1. *Geophagus surinamensis* (Bloch), Pellegrin, 162.

Geophagus megasema and *altifrons* Heckel; *Chromis proxima* Castelnau.

Habitat: Amazons and northward.

2. *Geophagus steindachneri* Eigenmann & Hildebrand.

Geophagus brasiliensis Steindachner, Fischfauna des Cauca, etc., not *brasiliensis* Quoy & Gaimard.

Habitat: Magdalena Basin.

3. *Geophagus brasiliensis* (Quoy & Gaimard), ...Pellegrin, 156.
Chromis unipunctata and *obscura* Castelnau; *Acara gymnopoma* Günther; *Geophagus rhabdotus, bucephalus, labiatus, scymnophilus* and *pygmæus* Hensel; *Chromis gibbiceps* Valenciennes.
Habitat: Coastwise streams from Bahia to Rio de la Plata.

4. *Geophagus balzanii* Perugia, ..Pellegrin.
G. duodecimspinosus Boulenger.
Habitat: Paraguay Basin.

5. *Geophagus australis* Eigenmann, E., 1907*a*, 454.
Habitat: La Plata.

6. *Geophagus brachyurus* Cope, Pellegrin, 159.
Habitat: Rio Grande do Sul.

7. *Geophagus cupido* Heckel, Pellegrin, 153.
Habitat: Amazons; Essequibo.

8. *Geophagus gymnogenys* Hensel, Pellegrin, 158.
? Geophagus camurus Cope.
Habitat: Rio Grande do Sul.

9. *Geophagus crassilabris* Steindachner, Pellegrin, 160.
Geophagus jurupari Vaillant, *non* Heckel.
Habitat: Colombia at Ibaqui; Panama, near Candelaria.

A10. *Geophagus camopiensis* Pellegrin, Pellegrin, 160.
Habitat: French Guiana.

A11. *Geophagus dæmon* Heckel, Pellegrin, 161.
Habitat: Middle course of Amazon.

A12. *Geophagus jurupari* Heckel, Pellegrin, 159.
Geophagus leucostictus Müller & Troschel; *Satanoperca macrolepis* Günther; *Geophagus pappaterra* Eigenmann & Kennedy, *non* Heckel.
Habitat: Guiana; Amazons; Paraguay.

SATANOPERCA Günther.

Type: *Geophagus acuticeps* Heckel.
Range: Guiana to Paraguay.

1. *Satanoperca balzanii* (Perugia), Pellegrin, 155.
Habitat: Paraguay Basin.

A2. *Satanoperca acuticeps* (Heckel), Pellegrin, 155.
Habitat: Amazon and Solimoens.

A3. *Satanoperca pappaterra* (Heckel), Pellegrin, 156.
Habitat: Guaporé and Guiana.

BIOTŒCUS Eigenmann & Kennedy.

Type: *Saraca opercularis* Steindachner.
Range that of the single species.
Saraca Steindachner preoccupied.

A1. *Biotœcus opercularis* (Steindachner), Pellegrin, 163.
Habitat: Villa Bella; Saraca.

SYMPHYSODON Heckel.

Type: *Symphysodon discus* Heckel.
Range: Amazons.

A1. *Symphysodon discus* Heckel, Pellegrin, 214.
Habitat: Amazons and tributaries.

A2. *Symphysodon discus æquifasciatus* Pellegrin, ...Pellegrin, 214.
Habitat: Santarem; Teffé.

PTEROPHYLLUM Heckel.

Type: *Platax scalaris* Cuvier & Valenciennes.
Range: Orinoco to Amazons.

A1. *Pterophyllum scalare* (Cuvier & Valenciennes), ...Pellegrin, 215.
Plataxoides dumerili Castelnau.
Habitat: Amazons.

2. *Pterophyllum altum* Pellegrin, Pellegrin, 216.
Habitat: Orinoco.

Family CARANGIDÆ.

OLIGOPLITES Gill.

Type: *Chorinemus occidentalis* Günther =*Scomber saurus* Bloch & Schneider.

Range: Tropical seas of America; one species in fresh water.

1. *Oligoplites palometa* (Cuvier & Valenciennes), ... J. & E., 899.

Habitat: Lake Yzabal to Lake Maracaibo.

Family GOBIIDÆ.

PHILYPNUS Cuvier & Valenciennes.

Type: *Platycephalus dormitator* Bloch =*Gobiomorus dormitor* Lacépède.

Range: Both slopes of middle America.

1. *Philypnus dormitor* (Lacépède), J. & E., 2195.

Platycephalus dormitator Bloch; *Batrachus guavina* Bloch & Schneider; *Eleotris longiceps* Günther; *Eleotris dormitatrix* Cuvier.

Habitat: Eastern slope of Mexico, Central America (Lake Nicaragua) to Surinam; entering salt water.

2. **Philypnus maculatus** (Günther), J. & E., 2195.

Philypnus lateralis Gill.

Habitat: Pacific slope from Sonora to Panama and Ecuador; entering salt water.

DORMITATOR Gill.

Prochilus Cuvier.

Type: *Dormitator gundlachi* Poey.

Range that of the single species.

A1. **Dormitator maculatus** (Bloch),[1] J. & E., 2196.

Eleotris mugiloides, sima and *? grandisquama* Cuvier & Valenciennes; *Eleotris latifrons* Richardson; *Eleotris somnolentus* Girard; *Eleotris omocyaneus* Poey; *Dormitator microphthalmus* Gill; *Dormitator gundlachi* Poey; *Dormitator lineatus* Gill.

[1] The Atlantic and Pacific slope forms have at times been considered distinct.

Habitat: Atlantic slope from South Carolina to Para; Pacific slope from Cape San Lucas to Panama; entering fresh and salt water.

GUAVINA Bleeker.

Type: *Eleotris guavina* Cuvier & Valenciennes.

Range: Cuba to Rio Grande do Sul.

A1. *Guavina guavina* (Cuvier & Valenciennes), ... J. & E., 2198.

Habitat: Cuba to Rio Grande do Sul; entering rivers and salt water.

A2. *Guavina brasiliensis* (Sauvage). (Probably identical with *guavina*.)

Habitat: Bahia.

ELEOTRIS Bloch & Schneider.

Type: *Gobius pisonis* Gmelin.

Culius Bleeker.

Range: Both slopes of middle America, West Indies, south to Rio de Janeiro.

1. *Eleotris amblyopsis* Cope, J. & E., 2199.

Habitat: Surinam.

2. *Eleotris pisonis* (Gmelin), J. & E., 2200.

Gobius amorea Walbaum; *Eleotris gyrinus* Cuvier & Valenciennes; *Eleotris belizianus* Sauvage.

Habitat: Florida to southern Brazil.

A3. *Eleotris perniger* (Cope), J. & E., 2201.

Habitat: Jamaica to Rio de Janeiro.

4. **Eleotris picta** Kner & Steindachner, J. & E., 2201.

Culius æquidens Jordan & Gilbert.

Habitat: Pacific slope, Sonora to Ecuador.

SICYDIUM Cuvier & Valenciennes.

Type: *Gobius plumieri* Bloch.

Range: Fresh waters of the West Indies and Central America to Ecuador.

1. *Sicydium plumieri* (Bloch), J. & E., 2206.
   Sicydium siragus Poey.
   Habitat: Fresh waters of the West Indies.
2. **Sicydium pittieri** Regan, Regan, 1907*a*, 260.
   Habitat: Panama to western Ecuador.
3. *Sicydium altum* Meek, Meek, 1907*a*, 149.
   Habitat: Costa Rica to 600 meters.

COTYLOPUS Guichenot.

Sicya Jordan & Evermann; *Oreogobius* Boulenger.

Type: *Cotylopus acutipinnis* Guichenot.

Range: Mazatlan to Panama.

1. **Cotylopus gymnogaster** (Ogilvie-Grant), ...J. & E., 2207.
   Habitat: Streams about Mazatlan.
2. **Cotylopus salvini** (Ogilvie-Grant), J. & E., 2207.
   Oreogobius rosenbergii Boulenger.
   Habitat: Streams near Panama to Ecuador.
3. *Cotylopus punctatus* Regan, Regan, 1905, 362.
   Sicydium multipunctatum Regan.
   Habitat: Tequesixtlan.

EVORTHODUS Gill.

Type: *Evorthodus breviceps* Gill.

Range that of the single species.

1. *Evorthodus breviceps* Gill, J. & E., 2208.
   Habitat: Fresh waters of Trinidad and Surinam.

LOPHOGOBIUS Gill.

Type: *Gobius cristagalli* Valenciennes = *cyprinoides* Pallas.

Range that of the single species.

1. *Lophogobius cyprinoides* (Pallas), J. & E., 2209.
   Gobius cristagalli Valenciennes.
   Habitat: Southern Florida; West Indies.

GOBIUS Linnæus.[1]

Gobionellus Girard; *Ctenogobius* Gill.

Type: *Gobius niger* Linnæus.

Range: Marine; in all warm seas.

1. **Gobius soporator** Cuvier & Valenciennes, ...J. & E., 2216.
   Gobius lineatus Jenyns; *G. catalus* Girard; *G. brunneus, mapo* and *laceratus* Poey; *G. andrei* Sauvage; *G. carolinensis* Gill; *Evorthodus catulus* Jordan & Gilbert.
   Habitat: Both coasts, occasionally entering rivers.
2. *Gobius fasciatus* Gill, ...J. & E., 2222.
   Habitat: Trinidad.

A3. *Gobius badius* Gill, ...J. & E., 2227.
   Gobius bosci Sauvage.
   Habitat: Mouth of Amazon.

AWAOUS Steindachner.

Chonophorus Poey.

Type: *Awaous ocularis*, etc.

Range: Both slopes of middle America, south to the Rio Doce and Ecuador.

A1. *Awaous flavus* (Cuvier & Valenciennes), ...J. & E., 2235.
   Habitat: Mouths of rivers, Surinam to Rio Doce.
2. **Awaous nelsoni** Evermann, J. & E., 2235.
   Habitat: Rosario, Sinaloa, Mexico.

A3. **Awaous taiasicus** (Lichtenstein), J. & E., 2236.

[1] It is very probable that other species of the genus *Gobius* enter rivers; *parvus* Meek, is recorded from Boca del Rio, Vera Cruz; *claytoni* Meek from the same place, and *microdon* Gilbert from San Juan Lagoon, north of Rio Ahome, Mexico.

Gobius banana and *martinicus* Cuvier & Valenciennes; *Chonophorus bucculentus* Poey; *Rhinogobius contractus* Poey; *Gobius dolichocephalus* Cope; *Euctenogobius latus* O'Shaughnessy.

Habitat: West Indies; west slope, Lower California to Panama; east slope, Mexico to Rio Doce.

4. *Awaous mexicanus* (Günther), J. & E., 2237.

Habitat: Eastern slope of Mexico.

5. **Awaous transandeanus** Günther, Günther, III, 62.

Gobius güntheri Regan.

Habitat: Western Ecuador (to western Mexico?).

GOBIOIDES Lacépède.

Type: *Gobioides broussonnetti* Lacépède.

Range: Marine.

A1. *Gobioides broussonnetii* Lacépède, J. & E., 2263.

Amblyopus brasiliensis and *oblongus* Bloch & Schneider; *Gobioides barreto* Poey; *Amblyopus mexicanus* O'Shaughnessy.

Habitat: West Indies and mouths of Atlantic rivers from Florida to Rio de Janeiro.

2. **Gobioides peruanus** Steindachner, J. & E., 2264.

Habitat: Peru and Ecuador, ascending rivers.

Family BATRACHOIDIDÆ.

THALASSOPHRYNE Günther.

Type: *Thallasophryne maculosa* Günther.

Range: South America, entering rivers.

A1. *Thalassophryne amazonica* Steindachner, ...Steindachner, 1876, 113.

Habitat: Xingu; mouth of the Rio Negro.

A2. *Thalassophryne nattereri* Steindachner, Steindachner, 1876, 115.

Habitat: Para.

Family BLENNIIDÆ.

CHASMODES Cuvier & Valenciennes.

Type: *Blennius bosquianus* Lacépède.

Range: Marine.

1. **Chasmodes maculipinna** Regan, Regan, 1903, 630.

Habitat: Rio Durango, northwest Ecuador.

Order HETEROSOMATA.

Family PLEURONECTIDÆ.

CITHARICHTHYS Bleeker.

Type: *Citharichthys cayennsis* Bleeker =*spilopterus* Günther.

Range: Marine and fresh water.

A1. *Citharichthys spilopterus* Günther, J. & E., 2685.

Citharichthys guatemalensis Bleeker; *Hemirhombus fuscus* Poey; *Citharichthys cayennsis* Bleeker.

Habitat: New Orleans to Rio Janeiro, entering rivers (Rio das Velhas).

2. **Citharichthys gilberti** Jenkins & Evermann, ...J. & E., 2686.

Citharichthys sumichrasti Jordan & Goss; *Citharichthys spilopterus* Günther 1869, not of 1862.

Habitat: Guaymas to Panama, entering rivers.

Family SOLEIDÆ.

ACHIRUS Lacépède.

Trinectes Rafinesque; *Grammichthys*, *Monochirus* Kaup; *Baiostoma* Bean.

Type: *Achirus fasciatus* Lacépède.

Range: Marine and fresh water.

1. **Achirus klunzingeri** (Steindachner), J. & E., 2697.

   Habitat: Panama to Guayaquil, entering rivers.

2. **Achirus mazatlanus** (Steindachner), J. & E., 2698.

   Habitat: Pacific slope of Mexico, entering rivers.

A3. *Achirus lineatus* (Linnæus), J. & E., 2697.

Monochir maculipinnis Agassiz.

Habitat: Florida Keys and the West Indies to Uruguay; all streams from Cayenne to La Plata; ascending the Amazon to Tabatinga.

4. **Achirus fonsecensis** (Günther), J. & E., 2699.

   Habitat: Pacific coast of tropical America, entering rivers.

5. **Achirus fischeri** (Steindachner), J. & E., 2699.

   Habitat: Mamone River near Panama.

6. *Achirus garmani* Jordan, Jordan & Goss, 1899, 314.

   Habitat: Rio Grande do Sul.

7. *Achirus fasciatus* Lacépède, J. & E., 2700.

   Habitat: Atlantic coast, north of the Isthmus of Tehuantepec; ascending rivers.

8. *Achirus jenynsii* (Günther), Günther, IV, 476.

Achirus lorentzi Weyenbergh.

Habitat: La Plata to Paraguay.

ACHIROPSIS Steindachner.

Type: *Achiropsis nattereri* Steindachner.

Range: Rio Negro to Goyaz.

A1. *Achiropsis nattereri* Steindachner, Steindachner, 1876, V, 110.

Habitat: Rio Negro.

A2. *Achiropsis asphyxiatus* Jordan, Jordan & Goss, 1889, 318.

Habitat: Goyaz.

APIONICHTHYS Kaup

Soleotalpa Günther.

Type: *Apionichthys dumerilii* Kaup.

Range: South America.

A1. *Apionichthys unicolor* (Günther), Günther, IV, 489.

Apionichthys dumerilii Kaup; *A. nebulosus* Peters.

Habitat: Surinam; Amazon, near Obidos.

SYMPHURUS Rafinesque.

Bibronia Cocco; *Plagusia* Cuvier; *Aphoristia* Kaup; *Glossichthys* Gill; *Amonopleurops* Günther; *Acedia* Jordan.

Type: *Symphurus nigrescens* Rafinesque.

Range: Marine.

1. *Symphurus plagusia* Bloch & Schneider, Günther, IV, 490.

   Achirus ornatus Lacépède; *Plagusia tessellata* Quoy & Gaimard; *Plagusia brasiliensis* Agassiz.

   Habitat: La Plata.

Order PLECTOGNATHI.

Family TETRAODONTIDÆ.

COLOMESUS Gill.

Batrachops Hollard.

Type: *Tetrodon psittacus* Bloch & Schneider.

Range: Marine and fresh waters of tropical America.

A1. *Colomesus psittacus* (Bloch & Schneider), ...J. & E., 1740.

Cherlichthys asellus Müller & Troschel.

Habitat: West Indies; Guiana to Marañon and Para.

LAGOCEPHALUS Swainson.

Physogaster and *Gastrophysus* Müller; *Promecocephalus* Bibron; *Tetrodon* Gill.

Type: *Tetrodon pennanti* Yarrell = *Tetrodon lagocephalus* Linnæus.

Habitat: Chiefly tropical seas.

1. *Lagocephalus lævigatus* (Linnæus).

Tetrodon curvus and *mathematicus* Mitchill; *Holocanthus melanothus* Gronow; *Tetrodon lineolatus* Poey.

Habitat: Cape Cod to Brazil, entering rivers; Para.

SUMMARY.

Families.	Number of Species in the Entire Area.	Number of Species in the Amazon Basin.
Petromyzonidæ	5	
Galeidæ	2	
Rajidæ	2	
Narcobatidæ	1	
Myleobatidæ	1	
Dasyatidæ	9	5
Lepidosirenidæ	1	1
Lepisosteidæ	2	
Aspredinidæ	22	10
Diplomystidæ	1	
Siluridæ	300	139
Hypophthalmidæ	2	1
Pygidiidæ	66	28
Callichthyidæ	34	16
Loricariidæ	208	81
Cyclopidæ	23	15
Catostomidæ	5	
Cyprinidæ	21	
Characidæ	659	317
Gymnotidæ	31	22
Electrophoridæ	1	1
Synbranchidæ	1	1
Anguillidæ	1	
Engraulidæ	13	7
Clupeidæ	5	3
Dorosomidæ	4	
Elopidæ	2	
Osteoglossidæ	1	1
Arapaimidæ	1	1
Pæciliidæ	160	14
Galaxiidæ	7	
Aplochitonidæ	2	
Belonidæ	8	4
Mugilidæ	11	1
Atherinidæ	33	
Polycentridæ	3	
Centropomidæ	8	3
Serranidæ	5	
Hæmulidæ	8	
Sciænidæ	13	7
Percidæ	1	
Cichlidæ	187	55
Carangidæ	1	
Gobiidæ	27	8
Batrachoididæ	2	2
Blenniidæ	1	
Pleuronectidæ	2	
Soleidæ	12	4
Tetraodontidæ	2	1
Totals	1917	748

LIST OF PAPERS DEALING WITH THE FRESH WATER FISHES OF SOUTH AMERICA.

Arranged according to the year of publication and alphabetically under each year.

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Piso, Gulielmus.

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Willoughby, Francis.

1686 De Historia Piscium.

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1749–69 Amœnitates Academicæ.

1754 Museum Adolphi Friderici, Stockholm, 1754.

Gronovius, Laurentius Theodorus.

1754–56 Museum Ichthyologicum.

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(1) Archiguiana.
(2) Archamazona.

Red, lines of primary origin of South American fresh-water fishes, *a*, from the ocean, *b*, from the hypothetical Antarctic continent, *c*, from the hypothetical Helenis. (1), (2), (7), (8) and (9), primary centers of radial migration. *Green*, lines of migration from the primary centers. (3), (4) and (5), secondary centers of radial migration. *Blue*, lines of migration from the secondary centers. (6), tertiary center of radial migration. *Brown*, lines of migration from the tertiary center.

MAP TO ILLUSTRATE THE MIGRATIONS OF SOUTH AMERICAN FRESH-WATER FISHES.